# NSF'S OVERSIGHT OF THE NEON PROJECT AND OTHER MAJOR RESEARCH FACILITIES DEVELOPED UNDER COOPERATIVE AGREEMENTS

## JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT &
SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

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# CONTENTS

**February 3, 2015**

# NSF'S OVERSIGHT OF THE NEON PROJECT AND OTHER MAJOR RESEARCH FACILITIES DEVELOPED UNDER COOPERATIVE AGREEMENTS

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**TUESDAY, FEBRUARY 3, 2015**

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT AND SUBCOMMITTEE ON
RESEARCH AND TECHNOLOGY,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
*Washington, D.C.*

The Subcommittees met, pursuant to call, at 10:04 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Barry Loudermilk [Chairman of the Subcommittee on Oversight] presiding.

LAMAR S. SMITH, Texas
CHAIRMAN

EDDIE BERNICE JOHNSON, Texas
RANKING MEMBER

# Congress of the United States
## House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
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Subcommittee on Oversight
Subcommittee on Research and Technology

***NSF's Oversight of the NEON Project and Other Major Research Facilities Developed Under Cooperative Agreements***

Tuesday, February 3, 2015
10:00 a.m. to 12:00 p.m.
2318 Rayburn House Office Building

Witnesses

**Dr. Richard Buckius,** Chief Operating Officer, National Science Foundation

**Dr. James P. Collins,** Chairman, National Ecological Observatory Network

**Ms. Kate Manuel,** Legislative Attorney, Congressional Research Service

## U.S. HOUSE OF REPRESENTATIVES
## COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

## HEARING CHARTER

*NSF's Oversight of the NEON Project and Other Major Research Facilities Developed Under Cooperative Agreements*

**Tuesday, February 3, 2015**
**10:00 a.m. – 12:00 p.m.**
**2318 Rayburn House Office Building**

### Purpose

On Tuesday, February 3, 2015, the Oversight and Research & Technology Subcommittees will hold a joint hearing to review the National Science Foundation's (NSF) oversight and management of the National Ecological Observatory Network Project (NEON Project) and other major research facilities developed under cooperative agreements. On December 3, 2014, the Committee held a hearing on the findings of two financial audits of the NEON Project conducted by the National Science Foundation's (NSF) Office of Inspector General (OIG) and the Defense Contract Audit Agency (DCAA).[1] These financial audits raised concerns about how NSF allowed NEON, Inc.[2] to use money for typically unallowable expenses such as liquor, lobbying contracts, and a $25,000 holiday party. In addition, it was discovered that NSF was aware of questionable and unsupported contingency costs in NEON's proposal, but decided to move forward with the project regardless.

Considering that the NSF funds a variety of large research projects, it is necessary to further examine the oversight of American taxpayer dollars to ensure that they are not spent frivolously.

### Witnesses

- **Dr. Richard Buckius**, Chief Operating Officer, National Science Foundation
- **Dr. James P. Collins**, Chairman, National Ecological Observatory Network
- **Ms. Kate Manuel**, Legislative Attorney, Congressional Research Service

### Background

As the primary federal agency supporting basic scientific research, the NSF plays a key role in the construction and operation of major research equipment and facilities. NSF funds a variety of large research projects, including multi-user research facilities, tools for research and education, and distributed instrumentation networks. Funding support

[1] Information on the hearing is available at: http://science.house.gov/hearing/full-committee-hearing-review-results-two-audits-national-ecological-observatory-network
[2] National Ecological Observatory Network Inc. (NEON) is the independent 501(c) (3) corporation created to build, operate, and manage the network.

for these projects is coordinated with other agencies, organizations, and countries to ensure projects are integrated and complementary.

***The National Ecological Observatory Network Project***

The NEON Project is a continental-scale ecological observation facility with 62 planned sites across the United States sponsored by the NSF to gather and synthesize data on the impacts of climate change, land use change, and invasive species on natural resources and biodiversity over 30 years.[3] NSF approved the overall project in late 2009 and the project manager's final construction proposal in 2011. NSF's review panel recommended that the budget for contingency costs be increased from approximately $50 million to $74 million, which brought the risk-adjusted total cost for the project to $433.7 million from August 2011 through July 2016.

***NEON Audits***

Two audits have been completed on NEON. The NSF OIG initiated these audits due to concerns identified with the NSF's lack of monitoring of several high-risk projects prior to entering into cooperative agreements and its failure to routinely review the awardee's costs submitted.[4]

In June 2011, the OIG contracted DCAA to audit NEON's construction cost proposal. After several weeks of work, DCAA advised the OIG that it was cancelling the audit because information supplied by NEON was inadequate to complete the necessary financial analyses. NSF and the OIG then intervened, enabling DCAA to complete its audit. However, before the audit was completed, NSF surprisingly accepted NEON's cost proposal and authorized the award of $433.7 million.

In September 2012, the audit was finalized. DCAA concluded that NEON's proposal was *not* acceptable as a basis for negotiation of a fair and reasonable cooperative agreement price. Of the proposed $433.72 million project cost, DCAA described approximately $102 million as "questionable" and described an additional $52 million of proposed costs as "unsupportable." This audit was transmitted to NSF, accompanied by an OIG written alert about excessive costs and accounting deficiencies for major research facilities. This alert included a series of recommendations to NSF.

The OIG subsequently commissioned a second DCAA audit of NEON accounting systems. DCAA completed a draft of this audit in May 2013, but it was not forwarded to the OIG for review until October 2014, due to internal disagreements within DCAA about the scope of the audit.

[3] http://www.neonin.org/about

[4] See NSF OIG's testimony before the Science, Space, and Technology Committee on Dec 3, 2014: http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/2014%2012%2003%20-%20Lerner%20Testimony%20-%20NEON_1.pdf

DCAA auditors found that NEON used management fees to pay for, among other typical federally unallowable expenses, $112,000 lobbying contracts, $25,000 for a holiday party, and $11,000/year for coffee services.

However, after months of deliberation, senior management at DCAA concluded that the detailed information about management fee expenditures by NEON, contained in the draft audit exceeded the scope of the assigned audit. This information was omitted from the audit report forwarded to the OIG in October 2014. After resolving several technical issues, the OIG forwarded the final audit report to NSF in November 2014. As a result of their investigation, the OIG referred two cases of suspected fraud within NEON to the U.S. Department of Justice.

***Management Fees***

"Management Fees" were created in the early 1960s to cover unallowable costs that might otherwise jeopardize the financial stability of a nonprofit entity. The intent was that the fees were only to be used for "ordinary and necessary" business expenses.[5] Concerns have arisen about the use of management fees to cover non-reimbursable costs for Federally Funded Research and Development Centers (FFRDCs) like the NEON Project. In its 1982 report, GAO found that awarding a management fee to a quasi-governmental organization was generally problematic. The report also noted that as early as 1969, GAO recommended that OMB adopt government-wide guidelines for use of management fees.[6]

Nevertheless, OMB has not adopted such guidelines, instead leaving it to individual federal agencies to devise their own policies for management fees. Until December 24, 2014, the relevant OMB Circulars (A-21 and A-122) concerning treatment of costs under federal grants and cooperative agreements with non-profit organizations did not address the allowability of management fees. OMB's new Uniform Guidance (which replaces those circulars as of January 1, 2015) addresses management fees only in the context of forbidding a non-profit entity from deriving a "profit."[7]

In response to questions that have arisen regarding specific federal agencies' management fee policies, GAO noted that federal agencies differ in oversight of management fees for FFRDCs and recommended that agencies share best practices.[8]

These cooperative agreements were to build, operate, and maintain NSF's Major Research Equipment and Facilities Construction (MREFC) facilities. According to NSF, it provides management fees to some of its large facility awardees to "facilitate their basic operations and viability." NSF permits awardees to use such fees for expenses that are otherwise non-reimbursable under the Office of Management and Budget's cost

[5] The NSF OIG, in a November 14, 2014 report entitled, "White Paper on Management Fees," describes the history of management fees for non-profit organizations receiving federal grants, the lack of OMB guidance, and relevant federal agencies' policies, including NSF.
[6] GAO Report, B-146810, *Need for Improved Guidelines in Contracting with Government-Sponsored Nonprofit Contractors.*
[7] Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Section 200.400(g).
[8] GAO-09-15 (October 2008)

principles. NSF indicated that it currently pays management fees on seven of its cooperative agreements with non-profits corporations. These fees range from .5% to 2% of a project's total cost.[9]

On December 30, 2014, four weeks after this Committee's first hearing on the issue, NSF proposed a new management fee policy.[10] NSF described the need for management fees for non-profits to pay for otherwise unallowable costs that are considered ordinary and necessary business expenses. It also included a non-exhaustive list of potentially, though not expressly stated, prohibited expenses such as alcohol, travel for non-business purposes, luxury items, and lobbying as set forth in the Uniform Guidance at 2 CFR 200.450. Furthermore, the proposal, while calling for an undefined periodic review, only *reduces* the amount of the management fee if the policy is not followed.

By comparison, a recent NASA final regulation prohibits paying a management fee that is otherwise unallowable under federal guidelines, effective December 15, 2014.[11] The rationale stated by NASA is that according to OMB Uniform Guidance: Cost Principles, Audit, and Administrative Requirements for Federal Awards, "Federal agencies are only authorized to pay for allowable, allocable, reasonable, and necessary costs." Under this standard, alcohol, excessive parties, and lobbying would be unallowable and thus prohibited.

In 2011, the Department of Defense (DOD) adopted a slightly different management plan for FFRDCs that posits management fees may be justified to cover certain non-reimbursable FFRDC expenses. The main features of DOD's policy: (1) require grant recipients to identify and justify each management fee expense in its fee proposal; (2) prohibit use of such fees for direct or indirect costs; and (3) require the submission of a comprehensive, annual fee review.

***Contingency Costs***

In order to keep MREFC project costs from escalating during construction, NSF instituted a no-cost overrun policy for MREFC-funded projects. "This policy requires that the total project cost estimate developed at the Preliminary Design stage have adequate contingency to cover all foreseeable risks, and that any cost increases not covered by contingency be accommodated by reductions in scope."[12] Program managers are required to maintain a contingency control log in order to notify NSF of all proposed uses of contingency funds.

According to the now former OMB Circular A-110, "The Budget Plan is the financial expression of the project or program as approved during the award process ... Recipients are required to report deviations from budget and program plans, and request prior approvals for budget and program plan revisions, in accordance with this section."

[9] October 14, 2014 letter from NSF Director Cordova to Senators Charles Grassley and Rand Paul.
[10] 79 Fed. Reg. 78497 (Dec. 30, 2014)
[11] 79 Fed. Reg. 67347 (Nov. 13, 2014)
[12] *National Science Foundation Large Facilities Manual*, March 31, 2011, p. 18.

Allowable contingency funds in a project budget are defined in the now former OMB Circular A-122 as costs that can be "foretold with certainty as to time, intensity, or an assurance of their happening." A project contingency acknowledges that specific items within an approved project budget plan may be subject to change in cost (e.g., construction materials) that cannot be predicted with precision. However, Circular A-122, asserts that, "Contributions to a contingency reserve or any similar provision made for events the occurrence of which *cannot* be foretold with certainty as to time, intensity, or with an assurance of their happening, are unallowable."[13] In this case, NEON included over $150 million of questionable or unsupportable contingency costs in their proposal. Given that this is ultimately the American taxpayer's money, we expect NSF to explain why they awarded this cooperative agreement knowing that information.

[13] OMB Circular A-122, pp. 26-7."

Chairman LOUDERMILK. The Subcommittee on Oversight and the Subcommittee on Research and Technology will come to order.

Without objection, the Chair is authorized to declare a recess of the Subcommittee at any time.

Good morning. Welcome to today's hearing titled "National Science Foundation's Oversight of the NEON Project and Other Major Research Facilities Developed under Cooperative Agreements."

Without objection, the Chair authorizes the participation of Ranking Member Johnson, Ms. Bonamici, Mr. Grayson, Mr. Bera, Ms. Esty, Ms. Clark and Mr. Beyer for today's hearing.

In front of you are packets containing the written testimony, biographies, and Truth in Testimony disclosures for today's witnesses.

I recognize myself for five minutes for an opening statement.

Good morning. First, I want to thank our witnesses for being here today. I am looking forward to hearing from each of you on this very important matter.

We are here today to discuss the National Science Foundation's oversight of the National Ecological Observatory Network, also known as the NEON Project, and other major research facilities developed under cooperative agreements.

The NSF funds a variety of large research projects, including multi-user research facilities, tools for research and education, and distributed instrumentation networks. In December, the House Science, Space, and Technology Committee held a hearing regarding one of these large research projects, the NEON Project, after learning about the mismanagement of appropriated funds.

Specifically, the hearing discussed the findings of two financial audits of NEON conducted by the National Science Foundation's Office of Inspector General and the Defense Contract Audit Agency. One of those audits discovered that NEON was allowed to use federal money for explicitly unallowable costs, including liquor, lobbying, and a lavish holiday party. Both audits of the NEON Project were initiated by the NSF Office of the Inspector General due to concerns about the lack of NSF's review of costs and accounting financial controls of major research facilities prior to entering into cooperative agreements. In fact, during its first audit in 2011, DCAA had to suspend its audit temporarily as the information supplied by NEON was inadequate to complete the necessary financial analyses. Of the proposed $433.72 million project cost, DCAA identified approximately $102 million of these costs as questionable and identified an additional $52 million of proposed costs as unsupportable.

The final version of the first DCAA audit was transmitted to the National Science Foundation in 2012, accompanied by an NSF Office of Inspector General written alert about the excessive costs and accounting deficiencies for major research facilities.

A second audit of the NEON Project, which was completed in October of 2014, revealed that NSF approved management fees, which included paying $375,000 for lobbying, $25,000 for a holiday party, and $11,000 a year for coffee services. In addition, according to an October 2014 NSF letter to Senators Grassley and Paul, NEON isn't the only cooperative agreement receiving such fees. If

one project can get away with this, how do we know they aren't all frivolously spending hard-earned taxpayer dollars?

As a small business owner and former director of a nonprofit, I wholeheartedly understand the importance of accountability. The fact that a nonprofit can treat American taxpayer dollars as profit without any kind of consequences is absolutely inexcusable. What is even more inexcusable is that NSF has received warnings about this kind of irresponsible spending over the past four years and has not taken adequate measures to resolve the matter. I am not only interested in learning about how the federal government can and needs to do a better job with transparency and accountability, but also how we can ensure that this kind of negligence is not occurring with other cooperative agreements.

Taxpayer money should be spent in a responsible way with the help of efficient management and oversight. If there are loopholes out there allowing this type of unethical spending to occur, then we need to get down to the bottom of it and make sure that it can no longer happen.

I look forward to today's hearing, which I anticipate will inform us on how these types of questionable expenses were charged to the American people. In the end, though, I hope that this hearing will inform us on how to provide better oversight and management of federally funded research projects to ensure that taxpayers can trust us with their money and know that it will be spent in the manner intended.

[The prepared statement of Mr. Loudermilk follows:]

PREPARED STATEMENT OF SUBCOMMITTEE ON OVERSIGHT
CHAIRMAN BARRY LOUDERMILK

Good morning. First I want to thank our witnesses for being here today. I am looking forward to hearing from each of you on this very important matter.

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Of the proposed $433.72 million project cost, DCAA identified approximately $102 million of these costs as "questionable" and identified an additional $52 million of proposed costs as "unsupportable." The final version of the first DCAA audit was transmitted to NSF in 2012, accompanied by an NSF OIG written alert about excessive costs and accounting deficiencies for major research facilities.

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I am not only interested in learning about how the federal government can—and needs to—do a better job with transparency and accountability, but also how we can ensure that this kind of negligence is not occurring with other cooperative agreements. Taxpayer money should be spent in a responsible way with the help of efficient management and oversight. If there are loopholes out there allowing this type of unethical spending to occur, then we need to get down to the bottom of it and make sure that it can no longer happen.

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Chairman LOUDERMILK. I now recognize the Ranking Member, the gentlelady from Texas, for an opening statement.

Ms. JOHNSON OF TEXAS. Thank you, Mr. Chairman. Before I begin my formal statement, I simply want to say that as of this morning, we have two additional Members assigned to this Committee, so we will be able to organize later this week, and we will be ready to act as Subcommittees.

Let me thank you, and I want to start by saying that I join all my colleagues in expressing my dismay that NEON used its management fee to pay for lobbying and alcohol and employee morale. I think we can all agree that we cannot support these actions. I also want to recognize NSF and NEON for adopting reasonable limits on what their management fee can be spent on going forward.

There is no doubt that some of my colleagues see advantage in the negative headlines that have come with the NEON story because they can point to those confused claims as evidence that NSF is not a careful steward of taxpayers' dollars. This situation might even be viewed by some as justifying the Chairman's continued effort to question peer-reviewed NSF grants for studies that the Chairman thinks sound funny.

That said, I want us all to fully appreciate where the pursuit of NEON may lead. Across the government, management fees have always been treated the same as profit—that is, they are the company's money. In that regard, I would note that our staff contacted GAO when we were seeking a witness because GAO is expert on contract matters. However, staff found that when it came to fees and their uses, the GAO had nothing to say because they do not audit fees or profits. So if we are going to move the goal line for NEON and start asking how their fee can be spent and who controls it, we are on a path to tackle the broader question of what everyone else who does business with the federal government does with their fees and their profits.

For example, major defense contractors do the great majority of their business with the federal government. These same companies spend tens of millions of dollars annually on lobbying. The amounts they spend daily on lobbying dwarf the amounts that NEON spent

in an entire year. If we are serious about ending such activities, we would have to introduce a bill to put significant restrictions on all companies' federal profits and fees. We would adopt such a law if we are serious about this issue, but I suspect that our outrage is going to begin and end with this one little environmental nonprofit.

I also want to point out the absurdity of being outraged at NEON for using their fee to pay for unallowable costs. That is because under the guidance for management fees, OMB makes clear that, by definition, fees can only be used for unallowable costs. Thus, the idea that NSF and NEON colluded to defraud the government into paying for unallowable costs by establishing a fee would implicate contracting officers all the way back to the Kennedy Administration at agencies across the government. Essentially, the NSF Inspector General has made a referral to Justice calling for criminal prosecution of NSF and NEON employees for doing exactly what the law permits them to do. It is hard to see how that represents fraud.

The management fee represents less than one-half a percent of the contract costs of the NEON project. The bigger questions—and bigger money—are associated with whether NSF has appropriate policies to estimate project costs, including contingency costs, and whether these policies are consistent with OMB guidance.

The NSF IG questions the use of contingency and the way the cost estimate on NEON—and every other major equipment project at NSF—was done. NSF disagrees. As Dr. Buckius will testify, they have gone through the extensive audit disposition and appeal process as laid out at NSF. Having adopted reforms, they feel they are fully consistent with OMB's expectations for how to manage risk and estimate costs. A plain reading of OMB's updated regulations unambiguously supports NSF's position. Yet the IG continues to make every effort to have her views adopted.

To put it mildly, this situation is unfortunate, and it is demoralizing to the agency's hardworking staff. But this Committee is not equipped to solve any of this today. The National Science Board, the Foundation's oversight board, is aware of these issues and has a good understanding of them. I hope that the Board will consider a careful review of NSF's practices and policies with respect to large facilities. If the Board identifies legitimate facilities management and oversight concerns, I would be happy to join my colleagues in appropriately addressing those concerns.

In the meantime, I intend to send a letter to GAO asking for a review of how agencies estimate costs for major R&D construction projects and how they set and manage contingency. GAO should look first at how NSF does it, and then provide some comparison as to how other agencies do the same things. Perhaps GAO can help settle the impasse at NSF.

In closing, I hope we can keep our rhetoric and our actions today measured and based on fact, and be clear that the issues to be considered, if we are serious, go far beyond one small environmental nonprofit's use of their fees.

And with that, Mr. Chairman, I yield back.

[The prepared statement of Ms. Johnson of Texas follows:]

PREPARED STATEMENT OF COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY RANKING MEMBER EDDIE BERNICE JOHNSON

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In closing, I hope we can keep our rhetoric and actions today measured and based on fact, and be clear that the issues to be considered, if we are serious, go far beyond one small environmental non-profit's use of its fee.

With that I yield back.

Chairman LOUDERMILK. So we are honored to have the presence of the Chairman of the full Committee with us here today, and so I now recognize the Chairman of the Science, Space, and Technology Committee, the gentleman from Texas, Mr. Smith, for an opening statement.

Chairman SMITH. Thank you, Mr. Chairman, and Mr. Chairman, also, congratulations on having the first hearing of the Oversight Subcommittee of the year, and I appreciate your leadership of the Subcommittee.

I also want to say to the Ranking Member, I will be happy to join her in the letter that she referred to a couple of minutes ago.

Mr. Chairman, this morning's hearing will focus on one of the National Science Foundation's largest major research facility projects, the National Ecological Observatory Network, or NEON Project. We are fortunate to have with us the Chief Operating Officer of the NSF, the Chief Executive Officer of NEON Incorporated, the nonprofit that manages the NEON Project, and a representative from the Congressional Research Service. Our witnesses will discuss the process for awarding, managing and overseeing this $433 million cooperative agreement between the NSF and NEON. Under this cooperative agreement, NSF has committed to pay up to $433 million to NEON for design, construction and initial operation of a national network of ecological sensors. The NEON project is the first of its kind, and it is also a huge public investment.

To assure taxpayer money is spent appropriately and as efficiently as possible, NSF and NEON needed to work together closely. As we heard at the first NEON hearing, the Inspector General's independent audit of NEON's cost proposal identified more than $150 million in unsupported or questionable costs. Most or substantially all of these costs might have been resolved by NSF and NEON, but NSF simply went ahead and made the NEON award. A subsequent audit of NEON's accounting system revealed a number of inappropriate NEON expenditures, including lobbying, parties, and travel, all financed by the management fee NSF agreed to pay NEON for ordinary and essential business expenses. These expenditures were brought to our Committee's attention and to public attention by a whistleblowing auditor at the Defense Contract Audit Agency, which did both audits for the NSF IG.

The results of the two independent audits and other information show there have been significant lapses in communications and financial controls for the NEON project. In the testimony we will hear today, NEON acknowledges that it has made some serious mistakes. For its part, NSF has already made some internal changes and has issued draft regulations to prevent expenditure of federal funds on expensive parties and other inappropriate activities.

The basic responsibility of any government agency is to act in the national interest. I hope we can develop a solution, including the possibility of legislative action, so that this misuse of funds does not happen again. We must remember it is the people's money, not the government's money.

This unfortunate situation illustrates the importance of adequate Congressional oversight of federal agencies. The NEON project's

problems may have never been brought to light except for the interest and actions our Committee has taken.

Thank you, Mr. Chairman, and yield back.

[The prepared statement of Mr. Smith follows:]

PREPARED STATEMENT OF COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY CHAIRMAN LAMAR SMITH

This morning's hearing will focus on one of the National Science Foundation's (NSF's) largest major research facility projects, the National Ecological Observatory Network, or NEON.

We're fortunate to have with us the Chief Operating Officer of the NSF, the Chief Executive Officer of NEON Incorporated, the non-profit that manages the NEON Project, and a representative from the Congressional Research Service.

Our witnesses will discuss the process for awarding, managing and overseeing this $433 million cooperative agreement between the NSF and NEON.

To be clear, this is a cooperative agreement, not a grant, so the NSF and NEON should have worked closely together throughout the agreement to prevent what has occurred here.

The NSF entered into an agreement with NEON to develop, construct and operate the project's network of sensors. This agreement was valued at over $400 million.

An audit of NEON's cost proposal identified more than $150 million in unsupported or questionable costs. It also indicated that a "fair and reasonable basis" did not exist for NSF to enter into the cooperative agreement with NEON.

But NSF did not wait for the audit results and went ahead and awarded the $400 million agreement to NEON.

During a second audit of NEON's management, several highly questionable expenditures of taxpayer funds were discovered. This includes hundreds of thousands of dollars spent on lobbying, lavish parties, and liquor for office happy hours.

Thankfully, Congress and the public were made aware of these questionable expenditures when a whistleblower came forward.

This morning, I hope to hear why NEON concluded, for example, that spending $25,000 for a holiday party was an appropriate use of federal funds? And why did the National Science Foundation allow this to happen?

The NSF must be held accountable for how they spend millions of taxpayers' dollars. Unfortunately, this appears to be another example of waste and misuse of taxpayer funds we've seen too often at the NSF.

The basic responsibility of any government agency is to act in the taxpayers' interest. I hope we can develop a solution so that this misuse of funds does not happen again. We must remember that it is the people's money, not the government's money.

Chairman LOUDERMILK. Thank you, Mr. Chairman.

If there are Members who wish to submit additional opening statements, their statements will be added to the record at this point.

At this point I ask unanimous consent that the following documents be entered into the record. We have an email, the letter to Senators Grassley and Paul as well as the National Science Foundation Business Systems Review. Without objection, we will have these entered into the record.

[The information appears in Appendix II]

Chairman LOUDERMILK. At this time I would like to introduce our witnesses today, and thank you for being here. We appreciate your attendance.

Our first witness is Dr. Richard Buckius. Did I pronounce that correctly?

Dr. BUCKIUS. Perfect.

Chairman LOUDERMILK. All right. Thank you. Dr. Richard Buckius, who is the Chief Operations Officer for the National Science Foundation. Thank you for being here.

Our second witness is Dr. James Collins, who is the Chairman of the National Ecological Observatory Network Incorporated. As well, thank you for being here.

And finally, our final witness is Ms. Kate Manuel. Is that right? All right. Who is a Legislative Attorney with the Congressional Research Service. Again, thank you for being here.

Pursuant to Committee rules, all witnesses will be sworn in before they testify, and I understand that Ms. Martha Rubenstein—is that correct—Chief Financial Officer for the NSF, will be advising Dr. Buckius in answering questions on the record. Ms. Rubenstein, please also stand to be sworn in. So if I could have all the witnesses please stand and raise your right hand? Do you solemnly swear or affirm that the testimony that you are about to give will be the truth, the whole truth and nothing but the truth, so help you God? Let the record reflect that the witnesses answered in the affirmative. Thank you, and please be seated.

In order to allow for discussion, please limit your testimony to five minutes. Your entire written statement will be made part of the official record.

I now recognize Dr. Buckius for five minutes to present his testimony.

**TESTIMONY OF DR. RICHARD BUCKIUS,
CHIEF OPERATING OFFICER,
NATIONAL SCIENCE FOUNDATION**

Dr. BUCKIUS. Mr. Chair, Ranking Member and Members of the Subcommittee, thank you for the opportunity to testify today. My name is Richard Buckius. I am the National Science Foundation's Chief Operating Officer, a position I assumed just in the fall of 2014.

As you have just been told, Marty Rubenstein, a colleague, is the Chief Financial Officer at NSF, and she will be joining me later to answer the questions and answers.

The objective of my oral comments are to address your specific questions and to focus on moving forward to improve NSF's processes related to our major research facilities.

To make two important context points before I answer the questions you have raised, the National Science Foundation supports fundamental research in the frontiers of knowledge across all fields of science and engineering primarily through financial assistance awards. That is, our grants and cooperative agreements. The NSF Act of 1950 expressly focuses NSF investments on extramural research, prohibiting direct operations of laboratories. It makes us different than some of our sister agencies.

The Federal Grant and Cooperative Agreement Act helps determine the mechanisms that NSF uses for its awards. The cooperative agreements are used if substantial involvement is expected by the awarding agency beyond that of routine monitoring and technical assistance. We use this mechanism to allow the scientific justifications, designs and specifications to be prepared by the science and engineering community to permit NSF's involvement in overseeing the scientific progress and investments, and to provide NSF the flexibility to address emerging needs of science and engineering communities.

Second, the management of major research facilities such as NEON is of critical importance to the Foundation. As you will hear from Dr. Collins, this is a one-of-a-kind continental-scale research instrument consistent of geographically distributed cyber-enabled networks of sensors and biological instruments. NSF relies on outside groups such as NEON Incorporated to build, manage and operate these unique scientific facilities. Management fees allow these groups to be viable and are an important tool for the stewardship of taxpayers' dollars. Taxpayers, NSF, the scientific community and the Nation would be ill served if these groups struggle financially or if they fail.

NSF acknowledges that some of the activities that NEON Incorporated engaged in using the management fees showed poor judgment even if they are not in violation of any law or regulation governing the use of these funds. The Foundation has learned a number of lessons about the governance of large facilities' management fees due to this event and has put in place significantly tighter oversight.

Now to your questions. First, like all federal agencies, NSF embraces organizations only for—excuse me—reimburses organizations only for costs incurred under federal awards that are determined to be allowable, allocable and reasonable under federal cost principles. NSF has controls in place to prevent the reimbursement of costs that are unallowable under federal cost principles. NSF has strengthened requirements set forth by the agency's large facilities manual for prospective large facility awardees to provide adequate documentation for cost estimates and through gateway reviews of these projects.

Second, regarding use of management fees, as you have heard, GAO has concluded that the use of management fees for at least some non-reimbursable expenses incurred by nonprofit organizations represent legitimate needs of the organization and they benefit the U.S. government. Although the payment of management fees has been a longstanding, legally permissible practice at NSF and other agencies, guidance on those fees, either government wide or at NSF, has not been as clear as we need, and enhanced procedures to monitor its use need to be put in place. To this end, I have asked our Chief Financial Officer to work aggressively to complete new policy implementations that will provide specific guidelines on the use of management fees and implement controls to monitor the actual management fee used by awardees to ensure that it is consistent with the intended purposes.

These proposed new policies have recently been published in the Federal Register, and NSF is moving forward with implementing their use and evaluating these fee requests.

And finally, the contingency cost estimates. NSF is fully compliant with the Office of Management and Budget guidance on the use of contingency fees estimates including when such estimates may be included in financial assistance awards. This guidance has recently been clarified by OMB and follows industry and government best practices on the construction of large facilities. NSF's strengthened requirements for cost estimates at gateway reviews incorporate these best practices.

Mr. Chair, although NEON Incorporated used the management fees in technically permissible under NSF's awards, NSF shares the Committee's concerns on the use of management fees. We have used the situation to clarify our policies and procedures in awarding the oversight of such fees. It is only through the strong support of the IG, our Inspector General, and the Congress that complete oversight of taxpayer resources can ultimately be achieved, and we appreciate the support.

Again, thank you for the opportunity to testify. The NSF CFO and I look forward to your questions.

[The prepared statement of Dr. Buckius follows:]

Testimony of

Dr. Richard O. Buckius
Chief Operating Officer
National Science Foundation

Before the

U.S. House of Representatives
Committee on Science, Space and Technology

Subcommittee on Research and Technology, and the
Subcommittee on Oversight

on

NSF's Oversight of the NEON Project and other Major Research Facilities
Developed Under Cooperative Agreements

February 3, 2015

Madam Chairwoman, Mr. Chairman and Members of the Committee, thank you for this opportunity to discuss NSF's oversight of the NEON project and other major research facilities developed under cooperative agreements.

The National Science Foundation (NSF) supports fundamental research at the frontiers of knowledge across all fields of science and engineering. NSF serves the national interest as stated by NSF's mission to promote the progress of science; to advance the national health, prosperity and welfare; to secure the national defense; and for other purposes; and we do so through our investment in a portfolio of more than 42,000 active awards. As part of our mission, NSF funds major research facilities such as NEON, the National Ecological Observatory Network. NEON is a one-of-a-kind continental-scale research instrument consisting of a geographically-distributed complex cyber-enabled network of sensors and biological instruments that will, among other advances, use airborne remote sensing data to improve our fundamental understanding of biology, emerging disease, water use, invasive species, and agricultural, forestry, and urban land-use.

NEON Incorporated, which is responsible for the NEON project, is a private, non-profit corporation to whom NSF has provided federal financial assistance for the design, construction and early operations of the NEON network. Support for NEON began in 2007 with construction of the NEON project initiated in 2011, and early operations of the network began in 2014. NSF support for NEON construction and its operation is provided under a series of cooperative agreements, a federal financial assistance instrument.

Mr. Chairman and Madam Chairwoman, it is important to note that NSF acknowledges that NEON could have shown better judgment in the use of their management fee – even if they were not in violation of any law or regulation governing the use of those funds. The Foundation has learned a number of lessons about the governance of large facilities and management fees due to this event and has put in place changes to help ensure proper stewardship.

The management of these large facilities is of critical importance to the Foundation. NSF sometimes relies on small consortiums formed by the research community to build, manage, and operate unique scientific facilities to deliver cutting edge science to the nation. Management fees allow those groups to be viable and are an important tool for good stewardship of taxpayer dollars. Taxpayers, NSF, the scientific community and the nation would be ill-served if those groups struggled with financial resources, or if they failed.

Due to the importance of research facilities to the Foundation and based upon the lessons learned from this event, NSF is putting in place tighter oversight of this critical tool. My testimony below will go into greater detail of these changes. As requested, I will focus on the three issues related to (i) **unallowable costs**, (ii) **management fees**, and (iii) **contingency cost allowances**.

**Unallowable Costs.** NSF, like other federal agencies, reimburses organizations for costs incurred under federal awards that are determined to be allowable, allocable, and reasonable under federal cost principles. NSF has controls in place to prevent the reimbursement of costs that are unallowable under federal cost principles. To ensure the proper accounting of funds in accordance with federal standards, NSF looks to the provisions of the Single Audit Act of 1984. Pursuant to that Act, and as directed by Congress and the Office of Management and Budget, NSF relies on the work of non-Federal auditors performing annual OMB-prescribed A-133 audits which constitute the federal standards for performing audits of states, local governments, and non-profit organizations. These audits help ensure compliance with federal requirements and are designed to provide adequate assurance that funds under federal financial assistance awards such as NEON are properly spent.

Additionally, NSF supplements these legislatively mandated and OMB-required audits with other post-award monitoring activities that the agency undertakes, such as accounting system reviews, formal business systems reviews covering internal controls for financial and other business functions, site visits including the examination of cost records, and indirect cost rate reviews that are part of the agency's obligation to establish indirect rates under certain awards including NEON.

I would also like to note that in addition to these established cost monitoring controls, NSF has also undertaken new additional cost control measures under large facility construction projects such as NEON to provide additional assurance that awards only include amounts for allowable costs. As part of these strengthened procedures, NSF will now obtain full formal audits of awardees' accounting systems and practices prior to entering into future large facility construction cooperative agreements totaling $100 million or more in those cases where NSF is the cognizant agency and where such an audit has not been performed within the past two years. In addition, NSF has strengthened requirements set forth in the agency's Large Facilities Manual for prospective large facility awardees to provide adequate documentation of cost estimates at gateway reviews and throughout the project. These requirements, and the recently implemented requirement to obtain independent cost reviews by outside parties prior to the award of large facility construction projects, are designed to provide NSF management with additional confidence in the estimated total project costs for these awards.

**Management Fees.** The use of management fees by non-profit organizations such as NEON Inc. has been a topic of government review many times in the past. Dating back to the Bell Report of 1962[1], issued by the Bureau of the Budget and signed by President Kennedy, the Government has recognized the need to provide fees to non-profit organizations. Whereas fees paid to for-profit entities provide contributions to profits, modest fees paid to nonprofit organizations provide some degree of operational stability, including operating capital and the ability to meet ordinary business expenses not reimbursable under Federal awards. Since 1969 the Government Accountability Office has concluded that at least some non-reimbursable expenses incurred by non-profit organizations represent legitimate needs of the organization and do benefit the U.S. Government.[2] Both the U.S. Department of Defense and the U.S. Department of Energy have published regulations on fees.[3]

Performance of cooperative agreement awards by non-profit organizations for the operation and management of large, complex programs entail business risk similar to those assumed under execution of a contract. Many expenses covered under a management fee are appropriate for the normal conduct of business, such as certain types of equipment purchase, meeting interest payments on some forms of debt, paying certain legal expenses, financing of essential facilities deemed necessary to operations, and other purposes.

Some non-profit organizations have limited or no other financial resources to cover certain necessary business expenses that may not be reimbursable under their federal awards. These organizations have limited or no outside sources of income to accumulate earnings or assets, and therefore may have no alternate means to recoup certain costs. While we agree with the Committee that payments of management fees should not be used for expenses that do not support the goals of the research project being conducted, we note that there are legitimate and well-founded purposes for providing management fee to non-profit organizations in limited circumstances, and in fact these organizations could not effectively support major research

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[1] Bureau of the Budget Report to the President on Government Contracting for Research and Development, pp. 40-41 (April 30, 1962).
[2] GAO/PLRD-82-54, GOVERNMENT OPERATIONS: Fee Guidelines Still Needed for Government-Sponsored Nonprofit Organizations (July 7, 1982), p. 4, referring to a 1969 GAO report (B-146810) titled Need for Improved Guidelines in Contracting for Research with Government-Sponsored Nonprofit Contractors.

[3] 48 CFR 210-404-74, *Fee requirements for FFRDCs*, U.S. Department of Defense and 48 CFR 970.1504-1-3, *Special considerations: Laboratory management and operations*, U.S. Department of Energy.

facility projects without relying on a management fee. This fact has been re-iterated in several Government reports, including the aforementioned Bell Report and GAO reports.

As previously noted, management fees can be used to provide an amount for working capital that may be necessary to ensure a level of retained earnings available to the organization in order to secure credit and borrowing to assure the financial health of the organization. Allowances for facilities capital may be necessary to allow an organization to acquire major assets and to address expenses that require immediate substantive financial outlays but that are only reimbursed by the government through depreciation or amortization over a period of years. Finally, management fee can provide amounts for other expenses that are necessary to support completion of a project but that are not otherwise reimbursable. Examples of potential appropriate needs of an organization include contract terminations and losses, certain appropriate educational and public outreach activities, and providing financial incentives to obtain and retain high caliber staff.

Initial consideration by NSF to pay a management fee to NEON Inc. began in 2008, after NSF became aware of the fact that as a newly formed entity without retained earnings or unrestricted assets, the organization was having problems securing credit. Practically speaking, NEON was unable to secure purchase cards for employees to make purchases necessary to support the project based on the fact that the organization had no collateral assets. Subsequently, in December 2008 NEON Inc. made a formal request to NSF for the payment of a management fee under the award. The request included information on intended uses of the management fee, including such items as contract terminations and losses, outreach activities, personnel related expenses, business meals and other activities. From 2008 to present, NEON has received a management fee amounting to approximately one-half of one percent of estimated award costs, or approximately $1.7M. The NSF organization responsible for management of the NEON cooperative agreement reviewed and approved the request consistent with the established agency practice of allowing the payment of a management fee under certain circumstances. After the initial determination of the management fee amount, NSF did not monitor or request data specific to actual fee usage since the management fees are not provided as reimbursement of any specific incurred cost, but instead are provided as an earned fee or profit. This determination not to monitor fee use was considered by NSF to be consistent with federal policy concerning the payments of fees or profits to organizations. Recently implemented updates to OMB policy guidelines in the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (termed *Uniform Guidance*), contain provisions stating that where expressly authorized by the terms and conditions of the Federal award, profit may be earned or kept by organizations performing federal financial assistance awards.

Since management fees are to address legitimate expenses that cannot otherwise be reimbursed as a cost, more controls need to be put in place to ensure that planned uses of management fees are consistent with those limited and specific uses I have described. NSF agrees that amounts provided to organizations for a management fee warrant careful consideration of the benefits that would be obtained by NSF for providing the fee. Although payment of management fees has been a long-standing practice at NSF, guidance on those fees has not been clear and formalized, and procedures to monitor its use need to be put in place. To this end I have asked our Chief Financial Officer to work aggressively to complete new policy

implementation that will provide specific guidelines on when management fees are warranted under agency financial assistance awards, provide information on appropriate uses for management fee, and implement controls to monitor actual management fee use by awardees to ensure that the use is consistent with intended purposes when the fee is established. These proposed new policies have recently been published in the Federal Register, and NSF is moving forward with implementing their use when evaluating management fee requests. These new policy requirements address the fact that a management fee is not to be used to provide organizations a means to cover expenses such as alcoholic beverages, personal or luxury items for employees, non-business related travel, or any activities that would contravene federal restrictions on lobbying. The new policy will also require that organizations requesting management fee provide information on actual uses of any management fee previously awarded by NSF in the preceding five-year period. When considering management fee for future awards, NSF will examine the extent to which awardee fee proposals have proven reliable when compared with actual uses of management fee. NSF will perform periodic reviews of management fee use under awards during performance of the project, and will examine the extent to which awardee fee proposals have proven reliable when compared with actual uses of management fee. Failure to reasonably adhere to planned uses of fee may result in reduction of future management fee amounts under the award.

NSF believes that the new policies that I have outlined will provide additional controls over management fee, and will help ensure its intended use. Since management fees are intended to address the types of legitimate costs that I have described, the agency needs to ensure that actual use of the fee is consistent with the intended use when the fee is negotiated, in that the actual fee amount is based on the representations made by the organization on its intended use. The strengthened policies that the agency is putting in place to determine and monitor management fee will help to ensure that use of the fee for reasons not consistent with the intent of the research project do not take place.

In sum, although NEON Inc.'s use of the management fee is technically permissible under NSF's award, we share your concerns that NEON could have shown better judgment in the use of their management fee. In fact, NSF has initiated action to address NEON Inc.'s management fee expenditures. NSF did not approve a request by NEON Inc. to increase their management fee under the award based on the unresolved issue identified and has also deferred the award of a management fee for early operations of the NEON network pending resolution of this matter. NSF is now in the process of analyzing data that we have requested and that has been provided by NEON Inc. detailing its past use of management fee under the NEON award. Similarly, NSF is also in the process of addressing the use of management fee under the other fourteen cooperative agreements where management fee has been provided. We share the Committee's concern that this review be completed expeditiously.

**Contingency Cost Allowances.** The matter of calculation and use of contingency cost allowances under NSF major research facility awards has been an outstanding issue between NSF and our Office of Inspector General since 2011. At that time, three audits commissioned by the OIG and performed by the Defense Contract Audit Agency determined that budget estimates under three major research projects being undertaken by the Agency, including NEON, had

questioned costs estimates. Of those questioned budget items were approximately $223 million in questioned amounts associated with contingency estimates which are now resolved.

Contingency estimation, which is a long standing project management practice that has been addressed in numerous professional publications, has recently also been addressed by OMB's *Uniform Guidance.* Per the OMB guidance, contingency is that part of a budget estimate of future costs, typically of large construction projects, IT systems, or other items approved by the Federal awarding agencies, which is associated with possible events or conditions arising from causes, the precise outcome of which is indeterminable at the time of estimate, and that experience shows will likely result in additional costs for the approved activity or project.

Although NSF has in the past typically included contingency estimates in large facility construction awards, the NSF Office of Inspector General has disagreed with the amounts being included. For example, disagreements have arisen between NSF and the NSF OIG around what constitutes acceptable budgeting practices for contingency. There is a distinct difference between the concepts of responsibly budgeting for contingencies (using a risk-based methodology to estimate variations in established allowable construction costs under the cost principles) and the cost of paying into a general, non-specific contingency reserve. The latter is a separate cost category that is unallowable. OMB has recently clarified the difference between the two concepts. The OIG has taken a different interpretation of OMB policy and has extrapolated the term "certainty requirement" contained in the OMB guidance to mean that all costs associated with contingency estimates must be known in advance as to their time, intensity, and assurance of happening. This is not a position taken by the Agency, nor is it consistent with accepted best-practices.

In several audits, the OIG has cited the contingency provision of 2 CFR Part 220, and concluded that proposal budgets did not meet the certainty requirement of the aforementioned cost principle, nor did the estimate rest on adequate supporting documentation. However, as noted above, OMB has recently addressed these matters explicitly in publishing the *Uniform Guidance* and the rule-making process. OMB noted that the text addressing the use of contingency budgets in federal awards included in the proposed rule represented a clarification, not the adoption of a revised cost principle. As clarified by OMB through *Uniform Guidance,* a distinction is made between including contingency as part of budget estimating for large, complex activities such as large facility construction projects, (see paragraph (b) below), which is permissible, versus payments made to an organization's contingency reserve, (see paragraph (c) below), which are not. Thus, the OMB *Uniform Guidance,* 2 CFR §200.433, is determinative in this matter:

> (b) It is permissible for contingency amounts other than those excluded in paragraph (b)(I) of this section to be explicitly included in budget estimates, to the extent they are necessary to improve the precision of those estimates. Amounts must be estimated using broadly-accepted cost estimating methodologies, specified in the budget documentation of the Federal award, and accepted by the Federal awarding agency. As such contingency amounts are to be included in the Federal Award ..."

(c) Payments made by the Federal awarding agency to the non-Federal entity's "contingency reserve" or any similar payment made for events the occurrence of which cannot be foretold with certainty as to the time or intensity, or with an assurance of their happening, are unallowable ..."

Efforts to resolve disagreements between the Office of Inspector General and the NSF Office of Budget, Finance and Award Management on this matter, including through re-audit of the three major research facility projects, failed to resolve differences on whether amounts for contingency estimates were appropriate for inclusion in award budgets. Based on this impasse, and in accordance with federal policies set forth by OMB for resolving differences between agencies and audit organizations such as Offices of Inspectors General, recommendations made by the OIG concerning contingency estimates as well as concerning other matters associated with cost management oversight of major research facility projects, were escalated to the Agency Audit Follow-up Official in May 2014. The escalated recommendations were first reviewed by Dr. Cora Marrett, Deputy Director of NSF, as the agency Audit Follow-up official, and subsequently were re-evaluated by myself. In October 2014, after careful review of the documentation provided to me on the matter, in the capacity of Agency Audit Follow-up Official I determined that NSF's practices on estimating and using contingency estimates properly follow OMB guidance by including the contingency in the award.

My determination that contingency estimates be included in budget proposals for major research facility awards included consideration of the recently clarified guidance from OMB. The updated OMB policy guidance also explicitly states that except for certain restrictions that NSF is compliant with, amounts for contingency estimates may be included in financial assistance awards.

**Conclusion.** To summarize:

- NSF, like other federal agencies, only reimburses organizations for costs incurred under federal awards that are determined to be allowable, allocable and reasonable under federal cost principles. NSF has strengthened requirements, including those set forth in the agency's Large Facilities Manual for prospective large facility awardees to provide adequate documentation of cost estimates at gateway reviews and throughout the project.
- The Government Accountability Office has concluded that the use of management fees for at least some non-reimbursable expenses incurred by nonprofit organizations represent legitimate needs of the organization and that they benefit the U.S. Government.
- NSF is fully compliant with OMB guidance on the use of contingency. Except for certain restrictions NSF is compliant with, amounts for contingency estimates may be included in financial assistance awards.

Madam Chairwoman and Mr. Chairman, although NEON Inc.'s use of the management fee is technically permissible under NSF's award, NSF shares the Committee's concerns that NEON could have shown better judgment in the use of their management fee. We are following up with NEON on those findings. In addition, we have used this situation to clarify our policies and procedures in the awarding, and oversight, of those fees.

It is only with the strong support of the Inspector General and Congress that complete oversight of taxpayer resources can be ultimately achieved, and we are appreciative of those efforts. The Foundation looks forward to continue working with the Committee and with our Office of Inspector General as we implement these changes in order to best serve science and technology in the national interest.

Thank you again for the opportunity to testify. I would be pleased to answer your questions.

**Richard O. Buckius**

Chief Operating Officer
Senior Science Advisor
National Science Foundation, Washington, DC, USA

and

Professor of Mechanical Engineering
Purdue University, West Lafayette, IN

Dr. Richard Buckius has been at the National Science Foundation as a Senior Science Advisor since June of 2014 and Chief Operating Officer since October of 2014. Recently, he was the Vice President for Research and is Professor of Mechanical Engineering at Purdue University (2008-14). Previously, he was Head of the Department of Mechanical and Industrial Engineering (1998-05), Associate Vice Chancellor for Research (1988-91), and Richard W. Kritzer Professor (1992-97) at the University of Illinois at Urbana-Champaign (UIUC). Dr. Buckius also served as the National Science Foundation's Assistant Director for Engineering (2006-08), Director for the Engineering Directorate's Division of Chemical and Transport Systems (2004-05), and Program Director of the Thermal Systems and Engineering Program (1987-88).

Dr. Buckius is author/co-author of numerous publications, books and invited talks and articles in the areas of radiation heat transfer, numerical fluid mechanics, and combustion. He co-authored a textbook titled *Fundamentals of Engineering Thermodynamics* (Mc-Graw-Hill) which was published in English, Spanish and international versions. He is a member of the editorial boards of *Nanoscale and Microscale Thermophysical Engineering*, *Heat Transfer Research*, and *Heat Transfer-Asian Research.* He was Associate Technical Editor for the American Society of Mechanical Engineers (ASME) *Journal of Heat Transfer.*

Among his honors include ASME's Richards Memorial Award, ASME's Potter Gold Medal, Heat Transfer Division 75th Anniversary Medal, and American Society for Engineering Education Ralph Coats Roe Award. He has received numerous teaching awards, including UIUC Campus Award for Excellence in Undergraduate Teaching and six Mechanical Engineering Alumni Teaching awards.

Dr. Buckius received his bachelor's and master's degrees and PhD in mechanical engineering at the University of California, Berkeley, in 1972, 1973 and 1975, respectively.

Chairman LOUDERMILK. Thank you, Dr. Buckius.

I now recognize Dr. Collins for five minutes to present his testimony.

**TESTIMONY OF DR. JAMES P. COLLINS, CHAIRMAN, NATIONAL ECOLOGICAL OBSERVATORY NETWORK**

Dr. COLLINS. Distinguished Chairwoman Comstock and Chairman Loudermilk, Ranking Member Johnson and Members of the Committee on Science, Space, and Technology, my name is Dr. James Collins. I serve as Chairman of the Board of Directors of NEON Inc., a 501(c)(3) corporation established to implement NEON, or the National Ecological Observatory Network Project. The project is supported by the NSF. From 2005 to 2009, I served as Assistant Director for Biological Sciences at the National Science Foundation. Since 2010, I have had no formal affiliation with the agency.

I appreciate the opportunity to come before this Committee, which has taken the lead in Congress in ensuring that the United States remains the standard-bearer in cutting-edge scientific research. We appreciate very much that this Committee has been a strong supporter of NEON from its inception.

As many of you know, NEON is an advanced research infrastructure for the study and analysis of the biosphere on a regional to continental scale. Living systems are experiencing some of the greatest rates of alteration caused by multiple changes in the environment. These changes affect biodiversity, air quality, water resources, agriculture, and other goods and services that healthy ecosystems deliver to humans. Understanding how these changes impact our natural resources requires a fully integrated, multi-scale research infrastructure to detect, understand, and forecast changes. The data sets collected by NEON will allow us to understand, at an unprecedented level of detail, the impacts of large-scale environmental changes on our ability to sustainably meet society's food, fiber, energy, and water needs.

Moreover, NEON is not only an essential investment for continued U.S. scientific leadership, but it also helps fuel our Nation's long-term competitiveness and innovation by advancing basic and applied ecological research.

You have asked that I address three specific topics in my testimony. The first two are "reimbursement for unallowable costs" and "terms, conditions, and use of management fees." Because I am not a lawyer, I will not attempt to delve deeply into the legal issues relating to unallowable costs and management fees, which are better addressed by the NSF in any event. But let me offer the following.

My understanding is that, under OMB regulations, unallowable costs are those costs of a business that are not allowed to be charged either as a direct cost or an indirect cost to a federally funded project. These costs generally include normal business costs such as fees for termination of contracts, late fees, and general advertising costs. Costs associated with government outreach, alcohol, and social events are also deemed "unallowable." Unallowable costs

cannot be paid with appropriated funds and must be paid by other funds of the organization.

NEON has received a management fee from the NSF for the management of the NEON project since 2009. It is our understanding that OMB has long held that fees in the case of a non-profit like NEON or profit in the case of a private business are not considered appropriated funds and are outside the scope of OMB Circular A–122 and the Byrd Anti-Lobbying Amendment.

NEON has used management fees to cover a variety of costs including those associated with contract termination, late fees and other normal business expenses. NEON has also used management fees to cover costs associated with government outreach, providing amenities including coffee for its employees, and meals and social functions that included the purchase of alcohol. We are aware that NSF is proposing to establish a new policy that would prohibit the use of management fees for these aforementioned categories. Let me say that we understand the NSF's desire to change its policy relative to management fees and we appreciate the Committee's concerns with these types of expenditures.

In retrospect, we could have done better when it came to determining how to spend management fees. Moving forward, regardless of what the law allows, NEON will not seek management fees for the expenses that NSF proposes to prohibit, including expenditures for alcoholic beverages and government outreach. Indeed, NEON has already implemented the restrictions that the NSF has proposed.

The third issue you asked us to address is "calculation and use of contingency cost allowances." NEON is supported via a cost-reimbursable assistance award between the NSF and NEON Inc., which means that NEON maintains a contingency pool fund. NEON developed a contingency cost proposal consistent with the NSF's Large Facilities Manual. NSF's guidelines include levels of reporting, approval, and review. NSF awarded NEON contingency funds consistent with its proposal.

Let me conclude by pledging going forward to redouble our efforts to be good stewards of the taxpayers' funds we receive. We owe as much to the American people and will do what it takes to retain their trust, and yours.

Thank you, and I welcome your questions.

[The prepared statement of Dr. Collins follows:]

neon
National Ecological Observatory Network

Dr. James P. Collins
Chairman of the Board of Directors, National Ecological Observatory Network, Inc.
Testimony before House Committee on Science, Space, and Technology Subcommittees on Oversight and Research and Technology
February 3, 2015

Distinguished Chairwoman Comstock and Chairman Loudermilk, Ranking Member Johnson and members of the Committee on Science, Space, and Technology, my name is Dr. James Collins. I serve as Chairman of the Board of Directors of NEON, Inc., a 501(c)(3) corporation established to implement NEON, the National Ecological Observatory Network project. This project is supported by the Major Research Equipment and Facilities Construction (MREFC) program of the NSF. From 2005 to 2009, I served as Assistant Director for Biological Sciences at the National Science Foundation. Since 2010, I have had no formal affiliation with the agency.

I appreciate the opportunity to come before the House Science, Space, and Technology Committee, which has taken the lead in Congress in ensuring that the United States remains the standard-bearer in cutting edge scientific research.

We appreciate very much that this Committee has been a strong supporter of NEON from its inception. As many of you know, NEON is an advanced research infrastructure for the study and analysis of the biosphere on a regional to continental scale. Living systems are experiencing some of the greatest rates of alteration caused by multiple changes in the environment. These changes affect biodiversity, air quality, water resources, agriculture, and other goods and services that healthy ecosystems deliver to humans. Understanding how these changes impact our natural resources requires a fully integrated, multi-scale research infrastructure to detect, understand, and forecast changes. The datasets collected by NEON will allow us to understand, at an unprecedented level of detail, the impacts of large-scale environmental changes on our ability to sustainably meet society's food, fiber, energy, and water needs.

NEON is a system of 106 field sites plus airborne assets that observes the pulse of our Nation's ecosystems. NEON represents the first scientific enterprise to measure a carefully selected suite of hundreds of variables in the same manner across an entire continent. Through NEON, the United States has the unique distinction of possessing the only scientific infrastructure capable of quantifying the environment on such a massive scale. Moreover, NEON is not only an essential investment for continued U.S. scientific leadership, but it also helps fuel our Nation's long-term competitiveness and innovation by advancing basic and applied ecological research.

You have asked that I address three specific topics in my testimony. The first two are "reimbursement for unallowable costs" and "terms, conditions, and use of management fees." Because I am not a lawyer, I will not attempt to delve deeply into the legal issues relating to unallowable costs and management fees, which are better addressed by the NSF in any event. But let me offer the following.

There are a number of items that constitute "unallowable costs" under NSF and Office of Management and Budget rules. My understanding is that, under OMB regulations, unallowable costs are those costs of a business that are not allowed to be charged either as a direct cost or an indirect cost to a federally-funded project. These costs generally include normal business costs such as fees for termination of contracts, late fees, and general advertising costs. Costs associated with government outreach, alcohol, and social events are also deemed "unallowable". Unallowable costs cannot be paid with appropriated funds intended for the direct or indirect costs of a project and must be paid by other funds of the organization. With the exception of very limited membership fees and management fees from the NSF, NEON does not receive any other funds to pay for unallowable business expenses.

NEON has received a management fee from the NSF for the management of the NEON project since 2009. It is our understanding that OMB has long held that <u>fees</u> in the case of a non-profit like NEON or <u>profit</u> in the case of a private business are *not* considered appropriated funds and are outside the scope of OMB Circular A-122 and the Byrd Anti-Lobbying Amendment. Moreover, NSF has consistently indicated to NEON that management fees constitute discretionary or unrestricted funds and can be used to pay for business costs that are considered unallowable. I have attached to my testimony a legal memorandum prepared by

outside counsel considering the legal issues associated with the use of management fees for unallowable costs.

NEON has used management fees to cover a variety of costs, including those associated with contract terminations, late fees, and other normal business expenses. NEON also has used management fees to cover costs associated with government outreach activities, providing amenities, including coffee, for its employees, and meals and social functions that included the purchase of alcohol. We are aware that NSF is proposing to establish a new policy that would prohibit the use of management fees for these aforementioned categories. Let me say that we understand the NSF's desire to change its policy relative to management fees and we appreciate the Committee's concerns with these types of expenditures.

In retrospect, we could have done better when it came to determining how to spend management fees. Moving forward, regardless of what the law allows, NEON will not seek management fees for the expenses that NSF proposes to prohibit, including expenditures for alcoholic beverages, meals for non-business purposes, and government outreach. Indeed, NEON has already *implemented* the restrictions that the NSF has *proposed*.

The third issue you asked us to address is "calculation and use of contingency cost allowances." NEON is supported via a cost-reimbursable assistance award between the NSF and NEON, Inc., which means that NEON maintains a contingency pool fund to support the base cost of the program. NEON developed a contingency cost proposal consistent with the NSF's Large Facilities Manual. NSF's guidelines include levels of reporting, approval, and review. NSF awarded NEON contingency funds consistent with its proposal.

Let me conclude by saying that NEON has tried to be as transparent as possible in terms of how it plans to use management fees. But we will not stop there. Instead we pledge going forward to redouble our efforts to be good stewards of the taxpayer funds we receive. We owe as much to the American people and will do what it takes to retain their trust, and yours.

Thank you, and I welcome your questions.

**Biographical Sketch for James Paul Collins**

Dr. James Collins received his B.S. from Manhattan College in 1969 and his Ph.D. from The University of Michigan in 1975. He then moved to Arizona State University where he is currently Virginia M. Ullman Professor of Natural History and the Environment in the School of Life Sciences. From 1989 to 2002 he was Chairman of the Zoology, then Biology Department. At the National Science Foundation (NSF) Dr. Collins was Director of the Population Biology and Physiological Ecology program from 1985 to 1986. He joined NSF's senior management in 2005 serving as Assistant Director for Biological Sciences from 2005 to 2009. NSF is the U.S. government's only agency dedicated to supporting basic research and education in all fields of science and engineering at all levels. Within the Biological Sciences Directorate Collins oversaw a research and education portfolio that spanned molecular and cellular biosciences to global change as well as biological infrastructure. He coordinated collaborations between NSF and other federal agencies through the President's National Science and Technology Council where he chaired the Biotechnology Subcommittee and co-chaired the Interagency Working Group on Plant Genomics. He was also NSF's liaison to NIH and served as coordinator across NSF of all environmental research and education.

Dr. Collins's research has centered on the causes of intraspecific variation. Amphibians are model organisms for field and laboratory studies of the ecological and evolutionary forces shaping this variation and its effect on population dynamics. A recent research focus is host-pathogen biology as a driver of population dynamics and even species extinctions. The role of pathogens in the global decline of amphibians is the model system for this research.

The intellectual and institutional factors that have shaped Ecology's development as a science are also a focus of Dr. Collins's research, as is the emerging research area of ecological ethics. Federal, state, and private institutions have supported his research.

Dr. Collins teaches graduate and undergraduate courses in ecology, evolutionary biology, statistics, introductory biology, evolutionary ecology, and professional values in science. Collins was founding director of ASU's Undergraduate Biology Enrichment Program, and served as co-director of ASU's Undergraduate Mentoring in Environmental Biology and Minority Access to Research Careers programs.

Honors include the Pettingill Lecture in Natural History at The University of Michigan Biological Station; the Thomas Hall Lecture at Washington University, St. Louis; Distinguished Lecturer in Life Science, Penn State University; President's Science Symposium Address, Bowdoin College; Phi Beta Kappa Lifto Amundson Lecture at The University of South Dakota; and serving as Kaeser Visiting Scholar at the University of Wisconsin-Madison. ASU's College of Liberal Arts and Sciences awarded him its Distinguished Faculty Award. He is a Fellow of the American Association for the Advancement of Science, a Fellow of the Association for Women in Science, and Past President of the American Institute of Biological Sciences (AIBS). Professor Collins is a member of the Board of Directors for the Association of American Colleges and Universities, the National Ecological Observatory Network, and is on the Board of Delegates for Oxford University Press.

Dr. Collins has served on the editorial board of *Ecology* and *Ecological Monographs* as well as *Evolution*. He is the author of numerous peer reviewed papers and book chapters, co-editor of three special journal issues, and co-author with Dr. Martha Crump of *Extinction in Our Times. Global Amphibian Decline* (Oxford University Press, 2009).

Chairman LOUDERMILK. Thank you, Dr. Collins.
I now recognize Ms. Manuel for five minutes.

**TESTIMONY OF MS. KATE MANUEL, LEGISLATIVE ATTORNEY, CONGRESSIONAL RESEARCH SERVICE**

Ms. MANUEL. Thank you. Chairmen, Ranking Members and Members of the Subcommittees, I am Kate Manuel and I am a Legislative Attorney with the Congressional Research Service. I am honored to be testifying before you today on CRS's behalf about certain issues pertaining to the National Science Foundation's use of cooperative agreements.

As requested, my testimony provides background information on three topics: when agencies may use cooperative agreements and other types of contractual agreement instruments, the allowability of costs under government contracts, and the traditional distinction between fees and costs.

First, as to the use of cooperative agreements and other types of instruments, under federal law, executive agencies generally must use cooperative agreements when their principal purpose is to transfer something of value to a non-federal entity to carry out a public purpose of support or stimulation authorized by federal law, and the agency expects to have substantial involvement with the non-federal entity in carrying out this activity. Grant agreements have the same principal purpose but must generally be used when the agency doesn't expect to have substantial involvement with the non-federal entity.

Procurement contracts, in contrast, generally do not have the principal purpose of transferring something of value but instead are typically used to acquire property or services for the direct benefit or use of the federal government. All three types of instruments could potentially constitute contracts as that term is generally understood. The relevant agreement between NSF and NEON appears to have been denominated a cooperative agreement.

Second, as to allowability, allowability is a core concept in compensating the government's partners under legal instruments that do not involve the payment of solely fixed prices or amounts. For a cost to be allowable, it must, among other things, be reasonable or not exceed in its nature or amount that which a reasonably prudent person would incur under the circumstances. It must also be allocable or involve supplies or services that are chargeable or assignable to the federal award or cost objective in accordance with the relative benefits received. In addition, the costs must generally conform to certain limitation or exclusions set forth in the applicable guidelines or regulations or in the agreement itself.

As to the three main types of cost discussed in relation to the NSF Neon agreement, the relevant guidelines and regulations provide that the cost of alcoholic beverages are unallowable. The cost of entertainment has historically been unallowable but now may be allowable in certain narrow circumstances, and the cost of specified lobbying activities are unallowable while other activities are permitted. However, certain provisions of law or policy guidance could be construed to mean that agencies may allow particular costs in

individual agreements that would not necessarily be allowable under the standard guidelines or regulations.

Third, and finally, as to fees, fees are potentially distinguishable from costs. Fees are arguably best known in the context of federal procurement contracts since the Federal Acquisition Regulation, or FAR, expressly authorizes the payment of fees as an allowance for profit to contractors working under certain types of contracts. The FAR does not specifically address the management fees reportedly provided for in the NSF NEON agreement. Similarly, there are no provisions in the relevant OMB circular or regulations or in the NSF's proposal and award policies and procedures guide that appear to address management fees in those terms. However, the NSF guide does provide the payment of fees or profit generally is permissible if expressly authorized by the terms and conditions of the award and neither it nor the relevant OMB circular or regulations would appear to expressly bar the payment of management fees under cooperative agreements.

As a matter of historical practice, some agencies have paid management fees as distinct from costs in the past. However, other agencies have expressly indicated they wouldn't provide management fees at least to for-profit entities. It should also be noted that the characterization of something as fees or costs in a contract by the parties would not necessarily be dispositive if the overall agreement evidenced a contrary intent.

This concludes my oral statement for today. I appreciate the opportunity to appear before you and look forward to answering any questions you may have. Thank you.

[The prepared statement of Ms. Manuel follows:]

**Kate M. Manuel – One Page Summary of Key Points**

**U.S. House of Representatives Committee on Science, Space, and Technology, Subcommittees on Oversight and on Research and Technology, Hearing on "NSF's Oversight of the NEON Project and Other Major Research Facilities Developed Under Cooperative Agreements" February 3, 2015**

- The Federal Grant and Cooperative Agreement Act ("Grant Act," P.L. 95-224) provides "uniform statutory guidelines" regarding when executive agencies may use "procurement contracts," "grant agreements," and "cooperative agreements."
    - *Cooperative agreements* must generally be used when the agency's "principal purpose" is to transfer something of value to a non-federal entity "to carry out a public purpose of support or stimulation authorized by law," and the agency expects to have "substantial involvement" with the non-federal entity in this activity.
    - *Grant agreements* have the same "principal purpose," but generally must be used when the agency does not expect to have "substantial involvement" with the non-federal entity.
    - *Procurement contracts*, in contrast, do not have the "principal purpose" of transferring something of value, but instead are generally used to "acquire ... property or services for the direct benefit or use" of the federal government.

- "Allowability" is a core concept in compensating the government's partners under legal instruments that do not involve the payment of solely fixed amounts or prices.
    - For a cost to be allowable, it must be "reasonable," "allocable," and conform to that limitations and exclusions set forth in the applicable guidelines or regulations, and in the agreement itself.
    - Here, the relevant guidelines and regulations provide that (1) the costs of alcoholic beverages are unallowable; (2) the costs of entertainment have historically been unallowable, but could potentially become allowable in certain circumstances; and (3) the costs of specified lobbying activities are unallowable, while others are permitted (such as providing technical presentations of topics directly related to the agreement's performance to legislative branch personnel in response to a documented request).
    - On the other hand, certain sources could potentially be construed to mean that agencies may make provisions for the allowability of particular costs in individual agreements that differ from—and prevail over—those set forth in these guidelines and regulations in at least certain circumstances.

- Fees are potentially distinguishable from costs, and are generally understood to represent an allowance for profit on certain types of contracts.
    - No provisions in the relevant OMB circular or regulations, or in the NSF's *Proposal and Award Policies and Procedures Guide*, appear to address "management fees."
    - On the other hand, none of these sources appears to bar the payment of fees, in addition to costs, under cooperative agreements.
    - Some agencies have paid "management fees"—as distinct from costs—in the past, although others have expressly indicated that they would not pay such fees, at least to for-profit entities.

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U.S. House of Representatives Committee on Science, Space, and Technology,
Subcommittees on Oversight and on Research and Technology,
Hearing on "NSF's Oversight of the NEON Project and Other Major Research Facilities Developed Under Cooperative Agreements"
February 3, 2015

Kate M. Manuel
Legislative Attorney
Congressional Research Service

Chairmen, Ranking Members, and Members of the Subcommittees. I'm Kate Manuel, and I am a legislative attorney in the American Law Division of the Congressional Research Service (CRS). I am honored to be testifying before you today on behalf of CRS. This testimony is intended to provide background information regarding (1) when agencies may use cooperative agreements and other types of contractual instruments; (2) the rules governing the allowability of costs under cooperative agreements and other instruments; and (3) the relationship between fees and costs.

## Cooperative Agreements and Other Contractual Instruments

Congress enacted the Federal Grant and Cooperative Agreement Act ("Grant Act," P.L. 95-224) in 1978 in order to provide "uniform statutory guidelines" regarding when agencies may use "procurement contracts," "grant agreements," and "cooperative agreements."[1] Individual examples of each type of instrument could constitute a contract, as that term is generally understood,[2] and the Grant Act did not alter agencies' legal authority to enter particular types of instruments.[3] Instead, the Grant Act specified

[1] H. REP'T NO. 95-481, 95th Cong., 1st Sess. 2 (1977).

[2] *See, e.g.*, BLACK'S LAW DICTIONARY 365 (9th ed. 2009) (defining "contract" as "[a]n agreement between two or more parties creating obligations that are enforceable or otherwise recognizable at law"); Restatement (Second) of Contracts §1 cmt. a (1979) ("'[C]ontract' [is] ... sometimes used as a synonym for 'agreement'"); *id.* §3 cmt. a ("[A]greement has in some respects a wider meaning than contract, bargain, or promise. ... The word 'agreement' contains no implication that legal consequences are or are not produced."). In certain cases, individual grant agreements, cooperative agreements, or procurement contracts could be found not to be legally enforceable either because of "defects" in the particular agreement or, particularly in the case of grants, because they are seen to involve "gifts or gratuities." *See, e.g.*, Jacqueline R. Sims LLC v. United States, No. 13-174C, No. 13-196C, Opinion and Order (Fed. Cl., February 25, 2014) (noting that the procurement contracts in question were unenforceable as written because they purported to be requirements contracts, but failed to make the contractor the exclusive provider of services, as is necessary for a requirements contract); D.R. Smalley & Sons, Inc. v. United States, 372 F.2d 505, 507 (Ct. Cl.), *cert. denied*, 389 U.S. 835 (1967) (characterizing certain federal grants of highway funds as "gifts or gratuities").

[3] *Cf.* Gov't Accountability Office, Interpretation of the Federal Grant and Cooperative Agreement Act of 1977, B-196872-O.M. (Mar. 1980) (opining that the Grant Act did not change the types of instruments that an agency could enter, but rather required that agencies use certain instruments in particular circumstances insofar as the agency otherwise had the authority to use that instrument). Authority to enter certain types of instruments is a particular issue with grant and cooperative agreements, since agencies have generally been seen to need express statutory authority to enter such agreements. *See, e.g.*, Gov't Accountability Office, PRINCIPLES OF FEDERAL APPROPRIATIONS LAW, Vol. II, at pg. 10—17 (3d ed. 2006). In contrast, agencies have been seen to have inherent authority to enter procurement contracts. *See, e.g.*, United States v. Tingey, 30 U.S. (5 Pet.) 115, 128 (1831).

when agencies may generally use each type of instrument in response to concerns raised by the Commission on Government Procurement[4] that "[f]ailure to distinguish between procurement and assistance relationships [(i.e., grant and cooperative agreements)] has led to both the inappropriate use of grants to avoid the requirements of the procurement system, and to unnecessary red tape and administrative requirements in grants."[5]

As amended, the Grant Act currently requires that executive agencies use *cooperative agreements* when the "principal purpose" of the relationship between the agency and a non-federal entity is to "transfer a thing of value" to the non-federal entity "to carry out a public purpose of support or stimulation authorized by a law of the United States," and "substantial involvement is expected" between the agency and the non-federal entity in carrying out the activity contemplated by the agreement.[6] *Grant agreements* are akin to cooperative agreements in that their "principal purpose" is also to "transfer a thing of value" to a non-federal entity to carry out an authorized "public purpose of support or stimulation." However, under the Grant Act, agencies may generally use grant agreements only when "substantial involvement" between the federal agency and non-federal entity is *not* expected (unlike cooperative agreements, where substantial involvement *is* expected).[7] *Procurement contracts* differ more from grant and cooperative agreements in that they generally do not involve "public purpose[s] of support or stimulation," but rather the acquiring, "by purchase, lease, or barter," of "property or services for the direct benefit or use of the United States Government."[8] However, the Grant Act also permits agencies to use procurement contracts in other circumstances if the agency "decides in a specific instance that use of a procurement contract is appropriate."[9]

The distinctions between the three types of instruments addressed by the Grant Act are not necessarily as clear in practice as the language of the act might suggest. Numerous lawsuits have been filed since the Grant Act's enactment asserting that an executive agency used an improper type of instrument in particular cases—generally a grant or cooperative agreement where, it is claimed, a procurement contract should have been used.[10] Most recently, and perhaps most notably, the Department of Housing and Urban Development (HUD) asked the Supreme Court to review a decision by the U.S. Court of Appeals for the Federal Circuit which found that HUD had purported to have entered cooperative agreements in specific instances when it should have used procurement contracts.[11]

[4] Congress established this commission—which was made up of two Members of the House, two Senators, the Comptroller General, two executive branch officials, and five non-governmental members—in 1969 and tasked it with recommending methods to promote the economy, efficiency, and effectiveness of federal procurement. It submitted its findings and recommendations in 1972. *See* Ralph C. Nash et al., THE GOVERNMENT CONTRACTS REFERENCE BOOK 106-107 (3d ed. 2007).

[5] Thermalon Indus., Ltd. v. United States, 34 Fed. Cl. 411, 418 (1995) (quoting S. REP. NO. 449, 95th Con., 2d Sess. 3 (1978)). *But see* ICP Northwest, LLC v. United States, 98 Fed. Cl. 29, 43 (2011) ("specific statutory language" authorizing the use of a particular type of instrument in a way contrary to the Grant Act "should prevail" over the general provisions of the Grant Act).

[6] 31 U.S.C. §6305.

[7] 31 U.S.C. §6304.

[8] 31 U.S.C. §6303(1).

[9] 31 U.S.C. §6303(2).

[10] *See, e.g.*, Partidge v. Reich, 141 F.3d 920, 925 (9th Cir. 1998) (finding that the Office of Federal Contract Compliance Programs correctly determined that certain Federal Emergency Management Agency agreements were grants, not procurement contracts); 360 Training.com, Inc. v. United States, 104 Fed. Cl. 575, 585 (2012) (finding that the Occupational Safety and Health Administration had purported to use cooperative agreements where it should have used procurement contracts); *Thermalon*, 34 Fed. Cl. at 419 (finding that the National Science Foundation properly denominated the instrument in question as a cooperative agreement); Anchorage, a Municipal Corp. v. United States, No. 14-166C, 2015 U.S. Claims LEXIS 17, at *11-*12 (Jan. 22, 2015) (finding the agreement in question a procurement contract, not a cooperative agreement, as the agency claimed).

[11] CMS Contract Mgmt. Servs. v. Mass. Housing Finance Agency, No. 14-781, Petition for Certiorari (filed S. Ct., Jan. 5, 2015).

No such allegations as to the improper use of cooperative agreements appear to have been raised as to the National Science Foundation's (NSF's) National Ecological Observatory Network (NEON).[12] However, some discussion of procurement contracts would appear to be relevant to discussion of cooperative agreements here because procurement contracts and cooperative agreements are subject to identical or analogous requirements in certain cases.[13] Indeed, insofar as such requirements are more likely to be litigated in the context of procurement contracts than in the context of cooperative agreements, the case law regarding procurement contracts could help inform understanding of the requirements as to cooperative requirements, provided the fundamental differences in the nature of and authority for these different types of instruments are kept in mind.

## Allowability of Costs

"Allowability" is a core concept in compensating the federal government's partners under legal instruments that do not involve the payment of solely fixed amounts or prices, regardless of whether the instrument is a cooperative agreement or procurement contract.[14] Somewhat different factors determine whether particular costs incurred by the government's partner in performing the work are allowable under cooperative agreements and procurement contracts. However, the key factors are generally the same, and serve to limit reimburseable costs to those that are (1) "reasonable," (2) "allocable," and (3) conform to any limitations or exclusions set forth in the governing regulations or in the contractual instruments themselves.[15]

Costs are deemed to be "reasonable" if, in their nature and amount, they do not exceed that which a "reasonably prudent person" would incur "under the circumstances prevailing at the time the decision was

[12] NSF has express statutory authority, pursuant to 42 U.S.C. §1870(c), to "enter into contracts or other arrangements, or modifications thereof, for the carrying on ... of such scientific or engineering activities as the Foundation deems necessary to carry out the purposes of this chapter ..." *See generally* PGMedia, Inc. v. Network Solutions, Inc., 51 F. Supp. 2d 389, 403 (S.D.N.Y. 1999); *Thermalon*, 34 Fed. Cl. at 413.

[13] *See, e.g., infra* **Table 1.**

[14] For example, some procurement contracts—commonly known as cost-reimbursement contracts—provide for the government to reimburse the contractor for all allowable, reasonable, and allocable costs it incurs in performing the contract, up to a total cost specified in the contract. *See generally infra* note 33 and accompanying text.

[15] *Compare* 2 C.F.R. §200.403 ("Except where otherwise authorized by statute, costs must meet the following general criteria in order to be allowahle under Federal awards: (a) [b]e necessary and reasonable for the performance of the Federal award and be allocable thereto under these principles[;] (b) [c]onform to any limitations or exclusions set forth in these principles or in the Federal award as to types or amount of cost items[;] (c) [b]e consistent with policies and procedures that apply uniformly to both federally-financed and other activities of the non-Federal entity[;] (d) [b]e accorded consistent treatment ...[;] (e) [b]e determined in accordance with generally accepted accounting principles (GAAP), except, for state and local governments and Indian tribes only, as otherwise provided for in this part[;] (f) [n]ot be included as a cost or used to meet cost sharing or matching requirements of any other federally-financed program in either the current or a prior period ...[; and] (g) [b]e adequately documented ...") *and* Office of Management Circular A-122, Cost Principles for Non-Profit Organizations, revised May 10, 2004, at Attachment A, §A.2.a, *available at* http://www.whitehouse.gov/omb/circulars_a122_2004/ ("To be allowable under an award, costs must meet the following general criteria: a. [b]e reasonable for the performance of the award and be allocable thereto under these principles[;] b. [c]onform to any limitations or exclusions set forth in these principles or in the award as to types or amount of cost items[;] c. [b]e consistent with policies and procedures that apply uniformly to both federally financed and other activities of the organization[;] d. [b]e accorded consistent treatment[;] e. [b]e determined in accordance with generally accepted accounting principles (GAAP)[;] f. [n]ot be included as a cost or used to meet cost sharing or matching requirements of any other federally financed program in either the current or a prior period[; and] g. [b]e adequately documented.") *with* 48 C.F.R. §31.201-2(a) ("A cost is allowable only when the cost complies with all of the following requirements: (1) [r]easonableness[;] (2) [a]llocability[;] (3) [s]tandards promulgated by the [Cost Accounting Standards] CAS Board, if applicable, otherwise, generally accepted accounting principles and practices appropriate to the circumstances[;] (4) [t]erms of the contract[; and] (5) [a]ny limitations set forth in this subpart.").

made to incur the cost," in the case of cooperative agreements; or "in the conduct of a competitive business," in the case of procurement contracts.[16]

Costs are generally said to be "allocable" if the "goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received," in the case of cooperative agreements; or "assignable or chargeable to one or more cost objectives on the basis of relative benefits received or other equitable relationship," in the case of procurement contracts.[17] This generally means that the costs (1) are "incurred specifically" for the cooperative agreement or procurement contract;[18] (2) benefit both the cooperative agreement/procurement contract and other work of the non-federal entity and can be distributed to them in reasonable proportion to the benefits received;[19] and/or[20] (3) are necessary to the overall operation of the non-federal entity.[21]

Costs conform to the limitations or exclusions set forth in relevant federal regulations if they are among those categorized as allowable under the applicable guidelines or regulations. The NSF Office of Inspector General report on NEON specifically discusses allowability under Office of Management and Budget (OMB) Circular A-122,[22] which historically set forth the cost principles applicable to non-profit organizations under grant and cooperative agreements. However, the regulations in 2 C.F.R. Part 200 will eventually, if they have not already, supersede those of OMB Circular A-122.[23] Thus, both are noted here. The applicable regulations as to procurement contracts are those in 48 C.F.R. Part 31. Each of these guidelines or regulations define when various costs may be allowable or unallowable, including alcoholic

[16] 2 C.F.R. §200.404 (cooperative agreements), OMB Circular A-122, at Attachment A, §A.3 (same); 48 C.F.R. §31.201-3(a) (procurement contracts).

[17] 2 C.F.R. §200.405(a) (cooperative agreements); 48 C.F.R. §31.201-4 (procurement contracts). Here, OMB Circular A-122 lacks a broad statement about the allocability of costs akin to that given in 2 C.F.R. Part 200, although it notes the same three factors, given below, in determining allocablity. *See supra* notes 18 to 20 and accompanying text.

[18] *Compare* 2 C.F.R. §200.405(a)(i) (costs "incurred specifically for the Federal award") *and* OMB Circular A-122, at Attachment A, §A.4.a.(1) (costs "incurred specifically for the award") *with* 48 C.F.R. §31.201-4(a) (costs "incurred specifically for the contract").

[19] *Compare* 2 C.F.R. §200.405(a)(2) (cost "[b]enefits both the Federal award and other work of the non-Federal entity and can be distributed in proportions that may be approximated using reasonable methods") *and* OMB Circular A-122, at Attachment A, §A.4.a.(2) (cost "[b]enefits both the award and other work and can be distributed in reasonable proportion to the benefits received") *with* 48 C.F.R. §31.201-4(b) (cost "[b]enefits both the contract and other work, and can be distributed to them in reasonable proportion to the benefits received").

[20] *Compare* 2 C.F.R. §200.405(a) (using "and" to link the three provisions) *and* OMB Circular A-122, at Attachment A, §A.4.a (same) *with* 48 C.F.R. §31.201-4 (using "or" to link the three provisions).

[21] *Compare* 2 C.F.R. §200.405(a)(3) (cost "[i]s necessary to the overall operation of the non-Federal entity and is assignable in part to the Federal award in accordance with the principles in this subpart") *and* OMB Circular A-122, at Attachment A, §A.4.a(3) (cost "[i]s necessary to the overall operation of the organization, although a direct relationship to any particular cost objective cannot be shown") *with* 48 C.F.R. §31.201-4 (cost "[i]s necessary to the overall operation of the business, although a direct relationship to any particular cost objective cannot be shown").

[22] Nat'l Science Foundation, Office of Inspector General, NSF OIG Audit Report No. OIG-15-6-001, Observations that Warrant NSF's Attention during Audit on National Ecological Observatory Network, Inc., Nov. 24, 2014, at 4. The rules regarding allowability that apply to a particular instrument are generally those that were in effect when the agreement was entered.

[23] *See* 2 C.F.R. §200.104(f) ("As described in §200.110 Effective/applicability date, this part supersedes the following OMB guidance documents and regulations under Title 2 of the Code of Federal Regulations ... A-122, "Cost Principles for Non-Profit Organizations" (2 CFR part 230)."); 2 C.F.R. §200.110(a) ("The standards set forth in this part which affect administration of Federal awards issued by Federal awarding agencies become effective once implemented by Federal awarding agencies or when any future amendment to this part becomes final. Federal awarding agencies must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB ...").

beverages, entertainment, and lobbying—all of which appear to have been at issue with NEON.[24] *See* **Table 1** below.

**Table 1. Allowability of Certain Costs under the Federal Regulations or Other Guidance Generally Governing Cooperative Agreements and Procurement Contracts**

| Type of Cost | Treatment under OMB Circular A-122 | Treatment under 2 C.F.R. Part 200 | Treatment under 48 C.F.R. Part 31 |
|---|---|---|---|
| **Alcoholic beverages** | Unallowable (OMB Circular A-122, Attachment B, at §3) | Unallowable (2 C.F.R. §200.423) | Unallowable (48 C.F.R. §31.205-51) |
| **Entertainment** | Costs of amusements, diversions, social activities, and any "directly associated costs" are unallowable (OMB Circular A-122, Attachment B, at §14) | Costs of amusements, diversions, social activities, and "any associated costs" are unallowable, except where specific costs that might be considered entertainment have a "programmatic purpose" and are authorized in the approved budget for the award or with prior written approval of the awarding agency (2 C.F.R. §200.438) | Costs of amusements, diversions, social activities, and "any directly associated costs" are unallowable, and costs unallowable under this cost principle are not allowable under any other cost principle (48 C.F.R. §31.205-14) |
| **Lobbying** | Certain costs are unallowable, including costs incurred in:<br>(1) attempting to influence the outcomes of federal, state, or local elections, referenda, initiatives, or "similar activities;"<br>(2) establishing, administering, contributing to, or paying the expenses of political parties, campaigns, political action committees, or other organizations established to influence election outcomes;<br>(3) attempts to influence (i) the introduction of federal, state, or local legislation, or (ii) the enactment or modification of pending legislation through communication with members or employees of the legislative branch (including efforts to influence state or local officials to engage in similar activity), or with any government official or employee in connection with a decision to sign or veto enrolled legislation;<br>(4) attempts to influence (i) the introduction of federal, state, or | Certain costs are unallowable, including costs incurred in:<br>(1) attempting to "improperly influence" an officer or employee of the federal executive branch to give consideration to or act regarding a federal award or regulatory matter; and<br>(2) in the case of nonprofit organizations and institutions of higher education (IHEs):<br>(a) attempting to influence the outcomes of federal, state, or local elections, referenda, initiatives, or "similar procedures" through contributions, endorsements, publicity, or similar activities;<br>(b) establishing, administering, contributing to, or paying the expenses of political parties, campaigns, political action committees, or other organizations established to influence election outcomes;<br>(c) attempts to influence: (i) the introduction of federal or state legislation; (ii) the enactment or modification of any pending | Certain costs are unallowable, including costs incurred in:<br>(1) attempting to "improperly influence" an officer or employee of the federal executive branch to give consideration to or act regarding a federal award or regulatory matter;<br>(2) attempting to influence the outcomes of federal, state, or local elections, referenda, initiatives, or "similar procedures" through contributions, endorsements, publicity, or similar activities;<br>(3) establishing, administering, contributing to, or paying the expenses of political parties, campaigns, political action committees, or other organizations established to influence election outcomes;<br>(4) attempts to influence (i) the introduction of federal, state, or local legislation, or (ii) the enactment or modification of pending legislation through communication with members |

[24] *See* NSF OIG Audit Report No. OIG-15-6-001, *supra* note 22.

| | | | |
|---|---|---|---|
| | local legislation, or (ii) the enactment or modification of any pending federal, state, or local legislation by preparing, distributing or using publicity or propaganda, or by urging members of the public to contribute to or participate in demonstrations, marches, rallies, fund raising drives, lobbying campaigns or letter writing or telephone campaigns; and<br><br>(5) legislative liaison activities, including attending legislative sessions or committee hearings, gathering information regarding legislation, and analyzing the effects of legislation, when such activities are carried on in support of or knowing preparation for an effort to engage in unallowable activities.<br><br>However, there are exceptions (e.g., providing technical and factual presentations of information on topics directly related to the performance of an agreement through hearing testimony, statements or letters to the legislative branch in response to documented requests)<br><br>(OMB Circular A-122, Attachment B, at §25) | legislation through communication with members or employees of the legislative branch (including efforts to influence state or local officials to engage in similar activity); (iii) the enactment or modification of pending legislation by preparing, distributing, or using publicity or propaganda, or by urging the public to contribute to or participate in demonstrations, marches, rallies, fund raising drives, lobbying campaigns or letter writing or telephone campaigns; or (iv) any government official or employee in connection with a decision to sign or veto enrolled legislation; and<br><br>(4) legislative liaison activities, including attending legislative sessions or committee hearings, gathering information regarding legislation, and analyzing the effects of legislation, when such activities are carried on in support of or knowing preparation for an effort to engage in unallowable activities.<br><br>However, there are exceptions (e.g., providing technical and factual presentations of information on topics directly related to the performance of an agreement through hearing testimony, statements or letters to the legislative branch in response to documented requests)<br><br>(2 C.F.R. §200.450) | or employees of the legislative branch (including efforts to influence state or local officials to engage in similar activity), or with any government official or employee in connection with a decision to sign or veto enrolled legislation;<br><br>(5) attempts to influence (i) the introduction of federal, state, or local legislation, or (ii) the enactment or modification of any pending federal, state, or local legislation by preparing, distributing or using publicity or propaganda, or by urging members of the public to contribute to or participate in demonstrations, marches, rallies, fund raising drives, lobbying campaigns or letter writing or telephone campaigns; and<br><br>(6) legislative liaison activities, including attending legislative sessions or committee hearings, gathering information regarding legislation, and analyzing the effects of legislation, when such activities are carried on in support of or knowing preparation for an effort to engage in unallowable activities.<br><br>However, there are exceptions (e.g., providing technical and factual presentations of information on topics directly related to the performance of a contract through hearing testimony, statements or letters to the legislative branch in response to documented requests)<br><br>(48 C.F.R. §31.205-22) |

**Source:** Congressional Research Service, based on various sources cited in **Table 1**.

**Note:** **Table 1** reflects only the restrictions on the allowability of costs associated with lobbying. For more detailed discussions of federal law regarding lobbying, see CRS Report 96-809, *Lobbying Restrictions on Non-Profit Organizations*, by Jack Maskell; CRS Report RL 31126, *Lobbying Congress: An Overview of Legal Provisions and Congressional Ethics Rules*, by Jack Maskell; CRS Report RL 34725, *"Political" Activities of Private Recipients of Federal Grants or Contracts*, by Jack Maskell; and CRS Report R40947, *Lobbying the Executive Branch: Current Practices and Options for Change*, by Jacob R. Straus.

The general principles noted in **Table 1** would suggest that the costs of alcoholic beverages have historically generally been, and currently remain, unallowable under cooperative agreements. Entertainment costs would generally have been unallowable under OMB Circular A-122, but could potentially be allowable under 2 C.F.R. Part 200 insofar as they have a "programmatic purpose" and are authorized in the approved budget for the award, or with the prior written approval of the awarding agency. The allowability of lobbying costs, in turn, would generally depend, under both OMB Circular A-

122 and 2 C.F.R. Part 200, upon the specific actions taken (e.g., attempting to "improperly influence" executive branch officers or employees versus providing a technical presentation of topics directly related to the agreement's performance to legislative branch personnel in response to a documented request).[25]

Beyond these general principles, though, it should also be noted that the terms of the cooperative agreement could also provide for—or potentially purport to remove—certain constraints or limitations on allowability provided for in the regulations. As previously noted, one of the key factors in the allowability of costs is that the costs conform to "any limitations or exclusions set forth in [the regulatory] principles *or in the Federal award* as to types or amount of cost items."[26] The possibility of alternate provisions as to allowability in a cooperative agreement is arguably particularly significant here, since the current edition of NSF's *Proposal and Award Policies and Procedures Guide* notes that

> [i]n the case of a discrepancy between the special provisions of an NSF grant [a term which here includes cooperative agreements] and the standards of the cost principles [in 2 C.F.R. Part 200], the special provisions will govern.[27]

This *Guide* also encourages awardees who anticipate charging items of "direct cost"[28] that might subsequently be disputed to discuss the matter with their Grants and Agreements Officer, and provides that officers who determine that such costs are "appropriate considering the special requirements of a particular NSF sponsored activity" are to document this through an advance agreement or understanding.[29] Such agreements may then be incorporated by specific language in the award notice, or by other written correspondence.[30] Other provisions of the *Guide*, OMB Circular A-122, and/or 2 C.F.R. Subpart 200 would appear to suggest some limits upon agencies' ability to depart from the general standards in drafting particular agreements.[31] However, the interplay between such provisions and the provisions like that in the *Guide* noted above would appear to be somewhat unclear in terms of which provisions control.

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[25] NSF has also indicated that its proposed management fee policy, to be found in its Large Facilities Manual, treats the cost of alcoholic beverages, "[m]eals for nonbusiness purposes or so extravagant as to constitute entertainment," and "lobbying as set forth ... at 2 C.F.R. 200.405" as expenses that "do not benefit" NSF and, thus, as generally inappropriate for inclusion in any "management fees." *See* Nat'l Science Foundation, Notice and Request for Comments on the National Science Foundation (NSF) Implementation of Proposed NSF Management Fee Policy, 79 Fed. Reg. 78497, 48498 (Dec. 30, 2014).

[26] 2 C.F.R. §200.403(b) (emphasis added). OMB Circular A-122 similarly provides that allowability depends, in part, upon "any limitations or exclusions set forth in these principles or in the award as to types or amount of cost items." OMB Circular A-122, Attachment A, at §A.2.b.

[27] Nat'l Science Foundation, *Proposal and Award Policies and Procedures Guide, Part II, Award & Administration Guide*, NSF15-1, Dec. 26, 2014, at pg. V-3. *Cf.* 2 C.F.R. §200.100(c) ("Cost Principles of this part establishes principles for determining the allowable costs incurred by non-Federal entities under Federal awards. The principles are for the purpose of cost determination and are not intended to identify the circumstances or dictate the extent of Federal government participation in the financing of a particular program or project. The principles are designed to provide that Federal awards bear their fair share of cost recognized under these principles except where restricted or prohibited by statute.").

[28] *Direct costs* are "costs that can be identified specifically with a particular final cost objective." OMB Circular A-122, Attachment A, at §B.1.

[29] Proposal and Award Policies and Procedures Guide, *supra* note 27, at pg. V-3. *Cf.* 2 C.F.R. §200.407(k) (noting that prior written approval of the awarding agency is required for entertainment costs).

[30] Proposal and Award Policies and Procedures Guide, *supra* note 27, at pg. V-3.

[31] *See, e.g.*, Proposal and Award Policies and Procedures Guide, *supra* note 27, at V-2 ("The funding items identified in the NSF award budget constitutes NSF's authorization for the grantee [or awardee under a cooperative agreement] to incur these costs, provided there is not a specific limitation in the grant language and the costs are otherwise allowable, allocable, and reasonable in accordance with the cost principles contained in 2 CFR § 200, Subpart E.").

## Key Differences between Costs and Fees

"Fees" are potentially distinguishable from costs. Fees are arguably best known in the context of federal procurement contracts, since the Federal Acquisition Regulation (FAR) expressly authorizes the payment of fees—as an allowance for profit—to contractors working under cost-reimbursement contracts,[32] as **Table 2** illustrates. (A *cost-reimbursement contract* is one that provides for the government to pay the contractor all allowable, reasonable, and allocable costs of performing specified work, up to a total cost provided for in the contract. A *fixed-price contract,* in contrast, provides for the government to pay the contractor a price whose amount or whose composition is specified at the time the contract is formed.[33])

**Table 2: FAR Provisions Regarding Fees Under Cost-Type Contracts**

| Type of Fees | Use Under FAR |
|---|---|
| **Fixed fees** | ***Cost-plus-fixed-fee contracts*** provide for payment to the contractor of a negotiated fee that is fixed at the inception of the contract. The fee does not vary with actual cost, although it may be adjusted as a result of the work performed under the contract. The FAR recognizes cost-plus-fixed-fee contracts as "suitable for use" when (1) the circumstances do not allow the agency to define its requirements sufficiently for a fixed-price type contract, or uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract; and (2) the contract is for the performance of research or preliminary exploration or study and the level of effort required is unknown, or the contract is for development and test and using a cost-plus-incentive fee, discussed below, is not practical. Cost-plus-fixed-fee contracts may not be used unless the contracting officer determines that (1) the amount of the price or fee does not exceed the limitations prescribed in 10 U.S.C. §2306(d) (procurements of defense agencies) or 41 U.S.C. [illegible] (procurements of civilian agencies); (2) the various factors prescribed in FAR §16.104 regarding the selection of contract type have been considered; (3) a written acquisition plan has been approved and signed at least one level above the contracting officer; (4) the contractor's accounting system is adequate for determining costs applicable to the contract or order; and (5) adequate government resources are available to award and manage a non-fixed-price contract. (48 C.F.R. §16.306) |
| **Incentive fees** | ***Cost-plus-incentive-fee contracts*** provide for the initially negotiated fee to be adjusted later by a formula based on the relationship of total allowable costs to total target costs, with the contract specifying a target cost, a target fee, minimum and maximum fees, and a fee adjustment formula, which provides, within limits, for increases in fees above the target fee under certain circumstances. The increase or decrease in fees under this type of contract is intended to provide an incentive for the contractor to manage the contract effectively. The FAR recognizes this type of contract as "appropriate" for use in acquiring services or in development and test programs when (1) the circumstances do not allow the agency to define its requirements sufficiently for a fixed-price type contract, or uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy to use any type of fixed-price contract; and (2) a target cost and fee formula can be negotiated that are likely to motivate the contractor to manage effectively. (48 C.F.R. §16.405-1) |
| **Award fees** | ***Cost-plus-award-fee contracts*** provide for a fee consisting of (1) a base amount fixed at the inception of the contract, if applicable and at the discretion of the contracting officer, and (2) an award amount that the contractor may earn, in whole or in part, during performance that is sufficient to provide "motivation for excellence" in the areas of cost, schedule, and technical performance. The FAR contemplates the use of cost-plus-award-fee contracts when (1) the work to be performed is such that it is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, schedule, and technical performance; (2) the likelihood of meeting acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance and provides the government with the flexibility to evaluate both actual performance and the conditions under which that performance was achieved; and (3) any additional |

[32] *See, e.g.*, GOVERNMENT CONTRACTS REFERENCE BOOK, *supra* note 4, at 264 ("In government contracting 'fee' is the term of art for profit the government agrees to pay on a cost-reimbursement contract. ('Profit' is used when the contract is a fixed-price type.)").

[33] For further discussion of the different types of procurement contracts, see generally CRS Report R41168, *Contract Types: Legal Overview*, by Kate M. Manuel.

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| administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits of using this type of contract, as documented by a risk and cost benefit analysis to be included in the Determination and Findings (D&F) required for use with any type of award fee contract. (48 C.F.R. §16.405-2) |

**Source**: Congressional Research Service, based on various sources cited in **Table 1**.

**Notes**: [1] Cost-plus-fixed-fee contracts, cost-plus-incentive-fee contracts, and cost-plus-award-fee contracts are distinct from cost-plus-percentage-of-the-cost contracts, which have been prohibited, as least for purposes of federal procurement law, since the 1950s. See P.L. 81-152, §304(b), 63 Stat. 395 (June 30, 1949) (codified, as amended, at 41 U.S.C. §3905) (procurements of civilian agencies); P.L. 84-508, §2306(a), 70A Stat. 130 (May 9, 1956) (codified, as amended, at 10 U.S.C. §2306(a)) (procurements of defense agencies); 48 C.F.R. §16.102(c). A cost-plus-percentage-of-the cost contract provides for the contractor to be paid a fee whose amount increases based upon the total costs that the contractor incurs.

[2] It should also be noted that the FAR prohibits the use of any type of cost-reimbursement contract, like those noted in **Table 1**, when acquiring "commercial items," or when the contract is awarded using sealed bidding. See 48 C.F.R. §16.301-3(b); 48 C.F.R. §16.201(a). As used here, the term "commercial item" includes "[a]ny item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and (i) [h]as been sold, leased, or licensed to the general public; or (ii) [h]as been offered for sale, lease, or license to the general public ...." 48 C.F.R. §2.101. It also includes similar services. *Id.* Sealed bidding is one of two main source-selection methods used by the federal government. In *sealed bidding*, the procuring activity awards the contract to the lowest-priced, qualified, responsible bidder without conducting negotiations with the bidders. This is in contrast to the other main source-selection method, *negotiated procurement*, wherein the procuring activity bargains with offerors after receiving proposals, and awards the contract to the offeror whose proposal rates most highly on evaluation criteria that include, but are not limited to, cost or price. In the case of negotiated procurements, any type or combination of types of contracts allowed under Subpart 16 of the FAR may be used. 48 C.F.R. §16.102(b).

The FAR does not specifically address the "management fees" reportedly at issue with NEON. Similarly, there are no provisions in OMB Circular A-122, 2 C.F.R. Part 200, or the NSF's *Proposal and Award Policies and Procedures Guide* that address either the types of fees recognized by the FAR, or "management fees."[34] However, none of these sources would appear to expressly bar the payment of a fee, in addition to costs, under a cooperative agreement.[35] Other agencies appear to have paid "management fees"—as distinct from costs—to non-federal entities performing cooperative agreements in the past.[36] Yet other agencies have, however, expressly indicated that they would not provide fees, at least to for-profit entities, under cooperative agreements.[37]

[34] To the contrary, OMB Circular A-122 expressly notes that "[p]rovision for profit or other increment above cost is outside the scope of this Circular." OMB Circular A-122, at §1.

[35] On the other hand, in announcing that it proposed to cease paying "management fees" as profit on grants and cooperative agreements, as noted below, the National Aeronautics and Space Administration (NASA) expressly stated that it has "no express or explicit authority with regard to 'management fees.'" Nat'l Aeronautics & Space Admin., Profit and Fee Under Federal Financial Assistance Awards: Proposed Rule, 79 Fed. Reg. 10436, 10436 (Feb. 25, 2014).

[36] *See, e.g.*, Profit and Fee Under Federal Financial Assistance Awards, 79 Fed. Reg. at 10436 (noting that NASA "is revising the NASA Grant & Cooperative Agreement Handbook to clarify that NASA does not pay profit or fee on Federal Financial Assistance awards, i.e. grants and cooperative agreements, to non-profit organizations."). NASA further notes that "[t]here appears to have been some confusion with the term 'management fee,'" and that it would continue to pay "management fees" that are allowable, allocable, reasonable, and necessary costs in accordance with the non-federal entity's established accounting practices and government cost principles. *Id. See also* Nat'l Oceanic & Atmospheric Administration, Financial Assistance for Research and Development Projects in the Gulf of Mexico and Off the U.S. South Atlantic Coastal States; Marine Fisheries Initiative (MARFIN), 63 Fed. Reg. 828 (Jan. 7, 1988) ("Profit or management fees paid to for-profit or commercial organization grantees are allowable at the discretion of NOAA. However, they shall not exceed 7 percent of the total estimated direct costs.").

[37] *See, e.g.*, Office of Juvenile Justice and Delinquency Prevention, Restitution Education, Specialized Training, and Technical Assistance (RESTTA) Program, 49 Fed. Reg. 21572 (May 22, 1984) (noting, among the eligibility requirements for certain funding, that "[f]or-profit organizations must waive any management fee or profit"); U.S. Dep't of Commerce, Advance Technology Program, 55 Fed. Reg. 12504 (Apr. 4, 1990) ("[F]unds awarded by the Program shall be used only for direct costs and not for indirect costs, profits, or management fees of the funding recipients.").

The payment of fees to a procurement contractor is generally governed by the terms of the contract regarding the "earning" of these fees, not the allowability of costs. Moreover, once the fees have been paid, the funds are generally seen as indistinguishable from the contractor's other funds, and may be used in any way that is permissible under generally applicable laws. The same could potentially be said of any fees paid to a non-federal entity under a cooperative agreement, although it should be noted that federal law could sometimes restrict what a recipient of federal funding may do with its own money.[38]

It is also important to note that the denomination of something as a "fee" or, alternatively, "costs" in a contract is not necessarily dispositive as to which it is. A fundamental principle of contract law is that contracts—including those of the federal government—are construed in light of the parties' intent.[39] In other words, in situations where the contract purports to say one thing, but the parties intended something else, the contract will generally be read in such a way as to be consistent with what the parties intended. Thus, for example, a contract that denominated itself a fixed-price contract could potentially be found to be a cost-reimbursement contract because other provisions of the contract clearly evidence the parties' intent that the government should reimburse the contractor for certain costs incurred in performing the contract.[40] A contract that refers to "fees" could potentially be found to involve "costs" for similar reasons. Alternatively, something denominated as "costs" could potentially be found to constitute a "fee."

## Conclusion

In conclusion, cooperative agreements are distinct from procurement contracts in that they are used when the executive agency's "principal purpose" is "to carry out a public purpose of support or stimulation authorized by a law of the United States," while procurement contracts are generally used when the agency's "principal purpose" is to acquire supplies or services "for the direct benefit or use" of the federal government. Nonetheless, the requirements governing agencies' use of procurement contracts could potentially help illuminate the requirements as to cooperative agreements. Both types of instruments are, for example, subject to similar, although not identical, restrictions upon the allowability of alcohol, entertainment, and lobbying costs. On the other hand, the requirements as to the payment of fees are much more defined as to procurement contracts than they are as to cooperative agreements.

Thank you again for inviting me to appear today. I am happy to respond to your questions.

[38] For example, non-profit social welfare organizations that are tax exempt under 26 U.S.C. §501(c)(4) are restricted from engaging in "lobbying activities" if they receive a federal grant, award, or loan. 2 U.S.C. §1611. This prohibition extends to any lobbying activities, including those undertaken with private funds. *See id.*

[39] The "plain language" of the agreement is the starting point for interpreting a contract. *See, e.g.*, McAbee Constr. Co., Inc. v. United States, 97 F.3d 1431, 1435 (Fed. Cir. 1996). However, the court or other tribunal will not give the words of the agreement their ordinary meaning when it is clear that the "parties mutually intended and agreed to an alternative meaning." Harris v. Dep't of Veterans Affairs, 142 F.3d 1463, 1467 (Fed. Cir. 1998). It should also be noted that any ambiguities in contracts, including government contracts, are generally construed against their drafter under an interpretative principle sometimes referred to as *contra proferentem*. *See, e.g.*, HPI/GSA-3C, LLC v. Perry, 364 F.3d 1327, 1334 (Fed. Cir. 2004). The government is typically viewed as the drafter when it is a party to a contract.

[40] *See, e.g.*, LSI Serv. Corp. v. United States, 422 F.2d 1334 (Ct. Cl. 1970). *See also* Jacqueline R. Sims LLC v. United States, No. 13-174C, No. 13-196C, Opinion and Order (Fed. Cl., February 25, 2014) (finding that a contract that was denominated a "requirements contract" was not of that type, since it did not provide for the vendor to be the exclusive supplier of the government's needs for goods or services in a particular time or place, as valid requirements contracts must do); Franklin Co., ASBCA 9750, 65-1 BCA ¶ 4,767, *aff'd*, Franklin Co. v. United States, 381 F.2d 416 (Ct. Cl. 1967) (similar).

**Kate M. Manuel – Education and Relevant Professional Experience**

Kate M. Manuel has worked as a Legislative Attorney, covering the areas of government contracts, property management, small business, and immigration law, within the American Law Division of Congressional Research Service (CRS) since 2008. In that capacity, she has addressed various legal issues relating to procurement contracts, leases of real property, concession contracts, public-private partnership agreements, cooperative agreements, interagency contracts, and other types of agreements entered into by federal agencies. Her published CRS reports address, among other things, contract types, public-private partnerships for purposes of real property management, evaluating the "past performance" of government contractors, and preferences for domestically manufactured materials in federal procurement. Before attending law school and joining CRS, Ms. Manuel worked as an academic librarian for 12 years, including at Duke University, George Washington University, California State University, Hayward, and New Mexico State University.

Ms. Manuel holds a BA in Latin and Anthropology from the University of Notre Dame, an MA in Classical Studies from Duke University, an MS in Library and Information Science from the Catholic University of America, and a JD from George Mason University School of Law. She is a member of the Maryland Bar.

Chairman LOUDERMILK. Again, I thank the witnesses for their testimony, and members are reminded that the Committee rules limit questioning to five minutes. With that, the Chair recognizes myself for five minutes for questions.

Dr. Buckius, as I mentioned in my opening statement, the NSF's letter to Senators Grassley and Paul indicates that 15 of your active awards use management fees. The NSF also notes in that letter that six of those awardees excluding NEON have received almost $5 million in fees.

I appreciate that you acknowledge that there may have been poor judgment used in those fees and that some controls are being put into place, but I am wondering how much of that $5 million for management fees was spent on liquor, lobbying and parties and other typically unallowable items.

Dr. BUCKIUS. So we have written to all of the six that you have referred to and asked them to report back to us on their use of their management fees, so it is not going to be possible for me to answer that question specifically at this particular time, although we are going to monitor that.

Chairman LOUDERMILK. If NEON has been spending taxpayer money under management fees for these type of expenditures—liquor, lobbying—without any apparent knowledge or oversight from NSF, how are we to know that other awardees are not doing the same thing with those? Is that what your report that you are looking to find out with the inquiry that you have done to these other awardees?

Dr. BUCKIUS. So as you have just heard from Ms. Manuel, these are perfectly legitimate, I would argue poor judgment, purchases. We are now writing to them all to figure out exactly how they have used it. We just don't have that answer at this point in time.

Chairman LOUDERMILK. And I appreciate your forthrightness there, and as you said, there is a lot of times a difference between what is technically legal and what is acceptable or right to do.

Do you anticipate, are there going to be consequences or have there been any consequences for those that you are aware of?

Dr. BUCKIUS. Well, because of what you have just been told by Ms. Manuel, since they are legal, the only thing we can do is not provide the next management fee, which is what we did in the case of NEON. Once we found this out, we no longer approved their next request, so that is our technique in order to be able to manage this.

Chairman LOUDERMILK. Further, if the NSF's proposed rule, it indicates that NSF is strengthening the controls, as you have mentioned that you are doing, it may be necessary to ensure that the user fees are consistent with those established criteria. The statement presupposes that there were already controls in fact in this letter to Senators Grassley and Paul when discussing management fees. NSF states, given that the fees awarded are discretionary funds, NSF does not require that its awardees report how these monies are expended. Thus, we do not require that the awardees submit an accounting of how they may cover otherwise unallowable costs with the management fee.

Since we are talking about taxpayer money that the NSF has awarded, why in the world would you not require awardees to submit an accounting of how they are spending that money?

Dr. BUCKIUS. So your first statement is exactly correct as we wrote to the Senators. We did not ask them to account for that for all the reasons that we have just discussed, as Ms. Manuel has indicated in the case of such fees. What we do is, we ask them at the origination to give us their intent, okay. In the case of the NEON project, the intent was very explicit. It said meals, it said government outreach, all of which would benefit them in their endeavor. So my point is, is that we did everything that we could within the restrictions that we had.

Chairman LOUDERMILK. With that, and as we have addressed already that there may have been some poor judgment used, should we be surprised since they did not have to account to you for the monies that were expended, are we to be surprised that they were used in poor judgment for things such as holiday parties?

Dr. BUCKIUS. So specifically, so let's take the government outreach one. In the case of the 2008 management fee description, here is what they said. NEON anticipates the need to provide education to various government organizations as to NEON's mission, strategy and requirements. That is a perfectly viable thing to use a management fee for, something that we would want them to do. Now, what they did, we thought was in very poor judgment, okay? It wasn't consistent with what I would have thought that they would have done, but when we gave them the management fee, they gave us an indication of what they were going to do with it, and we assumed that they would.

Chairman LOUDERMILK. Well, to follow up on that, so $25,000 on a Christmas party was outside of what the NSF would have expected NEON to use the money for. Is that what you are saying?

Dr. BUCKIUS. Again, I would say that is poor judgment, and to reiterate what I did say, we have posted in the Federal Register for comment various items that we think should not be included in any future management fees, and we are open to listening to folks to provide us this kind of information so that we are spending the taxpayers' money in the way that we want.

Chairman LOUDERMILK. Thank you. The Chair now recognizes the gentlelady from Texas, Ms. Johnson.

Ms. JOHNSON OF TEXAS. Thank you very much.

Dr. Buckius, I have listened to your testimony, and I think you have answered most of the questions. I am going to ask the question for reiteration.

The IG's recommended methods would also be an acceptance within the guidance, I suppose, and so it would seem to me that even though this could be labeled poor judgment, there is nothing about it that has been illegal.

Dr. BUCKIUS. That is a true statement.

Ms. JOHNSON OF TEXAS. And this appears to be a common practice across the government.

Dr. BUCKIUS. I can't comment on that. I hope not.

Ms. JOHNSON OF TEXAS. But—and I know that the IG's recommendations or methods, would also be in compliance with what you are dealing with now. The IG's seem to differ some, but at the

end of the day, who sets the policy at NSF? Is it a director and the board or is it the Inspector General?

Dr. BUCKIUS. So I guess officially it would be the director. Obviously the way NSF functions, we work very closely with the National Science Board, so I would assume that there is going to be a give and take to ensure that, but it is the agency that sets down these policies. The IG, as we all know, ensures and checks to ensure that we are all spending taxpayer money the way it should be spent.

Ms. JOHNSON OF TEXAS. Can you briefly describe the efforts at NSF to accommodate the IG's concerns about the risk in cost estimating and contingency?

Dr. BUCKIUS. Okay. So contingencies can be estimated in a number of different ways. The way we chose to do it is based upon a broadly accepted cost-estimating methodology. So this is not money that can be spent any way that they choose. There is a very specific layout of items that can be considered that you can't necessarily predict exactly how it is going to come out. That the principles that we use.

The IG would prefer that we use audits, and the audit that was referred to earlier was done and we received the information after we had made the award. That is a very important piece of information. So we made the award, and then the audit tells us that we should have done some reviews otherwise. Our estimating procedures are just different. I would argue as good as but different.

Ms. JOHNSON OF TEXAS. Thank you. Now, our research found that the federal government that—the practice in federal government goes back to the Bell Report in 1962, and to the degree that OMB even addresses fees or profit, it appears that OMB treats that money as the recipient's funds and not government money.

Dr. BUCKIUS. Correct.

Ms. JOHNSON OF TEXAS. My time is limited, but I would like you, Dr. Buckius, and Dr. Collins, if you would comment on, are you confident that the way the fees were spent by NEON does not represent a violation of law?

Dr. BUCKIUS. Specifically, it does—it is not a violation, okay? Again, I would use the words "poor judgment," okay, but not a violation.

Ms. JOHNSON OF TEXAS. Thank you. Dr. Collins?

Dr. COLLINS. That is correct. It is not a violation of the OMB circular and guidance that NEON received.

Ms. JOHNSON OF TEXAS. Thank you very much.

Thank you, Mr. Chairman. I yield back.

Chairman LOUDERMILK. The Chair recognizes the Chairwoman from Virginia, Mrs. Comstock.

Mrs. COMSTOCK. Good morning. Thank you, Mr. Chairman.

Certainly, we all want to be and are strong advocates for science and scientific research, so the situation today and what we are discussing is really our concern about, you know, not having problems like this, you know, that are public and the taxpayers see how their money is spent and then having that concern that it is not going to the very basic research and the things that we want it to, so I think—I certainly think my colleagues here, we want to have this discussion so that, you know, every dollar we are putting to-

wards this important effort is going to the vital research that we need, so I appreciate while there may not be legal problems, as you all have indicated, it is poor judgment, and I appreciate that that has been recognized.

And so I did want to—I had some questions here that we wanted to establish for the record that the independent Open Secrets website, it said NEON had paid at least $375,000 to registered lobbyists between 2010 and 2014. Would you be able to confirm that?

Dr. BUCKIUS. I can't confirm that, but again, for the reasons we said, since it is a management fee, it is permissible.

Mrs. COMSTOCK. Okay, you know, and I understand——

Dr. BUCKIUS. I absolutely agree with everything you just said, okay. We need to spend taxpayer dollars on science and engineering. That is the goal of the Foundation, and so I completely support all of your comments.

Mrs. COMSTOCK. Okay, and Dr. Collins.

Dr. COLLINS. I would have to check for the specific number with our financial people but I know that it is in that area.

Mrs. COMSTOCK. Okay, and we can submit for the record, Mr. Chairman, some records from the OpenSecrets.org, which do indicate $375,000, but if there is a correction that any of the witnesses would like to make, we could also include that in the record.

Could you explain the process in terms of hiring the lobbyists and what they were engaged to do?

Dr. COLLINS. Well, I was not involved in the hiring of the lobbyists as chairman of the board now, was not chairman at that particular time, but the engagement had to do, as had been described earlier, with retaining a group of individuals who could work as far as NEON is concerned to especially help educate Congress as far as what the NEON Project was about so that you would have the very best information in terms of making decisions that you needed to make.

Mrs. COMSTOCK. I know, and I think that is the concern we have because I know in instances when I was in the state legislature, we would give money to one body, then they would want to spend money on lobbyists to come back and lobby us for more money, and so spending taxpayer money to ask us for more taxpayer money I think is a frustration here that we have instead of having it go to the research because as we are evaluating this and giving the money to NSF, it is because we do value that research so you can—you know, you can come as an entity, others can come, citizens can come inform us of this, and that is our responsibility to understand that important thing rather than have outside lobbyists come and tell us what we are already tasked to do for the taxpayers.

So I am glad that that policy will be changed and you understand that the poor judgment of that, and I do think that unfortunately this happens across the government in a lot of ways, and I know in the case when we were in the state legislature when that came to us, we stopped that and we said, please, just come to us, talk to us about this directly, you know, we are already your advocates, and we want to be your advocates to have more basic research money but you make our job more difficult when these kind of things happen and then taxpayers look and say well, gee, you

took our money but it is now going not to that basic research but to the lobbyists.

So I would appreciate if we could, you know, maybe have any of the letters of engagement or information that you could provide for what they were tasked with and just sort of what the thinking is there so that maybe we can look at other areas of research where that kind of thing is going on where we maybe want to do what you all are doing now, which is putting a stop to that, recognizing that that makes our jobs as advocates more difficult.

So I believe I am running out of time here, Mr. Chairwoman, so I will yield back my few seconds here.

Chairman LOUDERMILK. The gentlelady has yielded back. Chairman Comstock also asked that certain records she referenced be added to the official record, and without objection, I ask unanimous consent that the documents be added to the official record.

[The information appears in Appendix II]

Chairman LOUDERMILK. At this time I recognize the gentleman from Florida, Mr. Grayson.

Mr. GRAYSON. Thank you, Mr. Chairman.

Ms. Manuel, stop me if I am wrong, all right? Among government contracts, arrangements like this in general, there are firm, fixed-price contracts and there are cost-reimbursement contracts, correct?

Ms. MANUEL. That is one of the ways, the taxonomies in which people talk about contracts, yes.

Mr. GRAYSON. All right. And among the types of cost-reimbursement contracts, there are cost-plus fixed fee contracts and cost-plus other kinds of fee contracts. Is that correct?

Ms. MANUEL. As to procurement contracts, yes.

Mr. GRAYSON. All right. And the general breakdown, the distinction that is made in that case is between costs and fees of various types. Is that correct?

Ms. MANUEL. That is correct.

Mr. GRAYSON. All right. Now, costs have to be allowable, allocable and reasonable, correct?

Ms. MANUEL. That is correct.

Mr. GRAYSON. But not fees, right?

Ms. MANUEL. No. If you are talking about the procurement contracts, you know, there, specifically, the fees have to be earned pursuant to the terms that are set forth in the contract.

Mr. GRAYSON. All right. So when we talk about—when we are talking about the allowability of costs, we are talking about the allowability of costs, right, not the allowability of fees? That is a meaningless term, correct?

Ms. MANUEL. As a general matter, that would be true. I mean, I can't say that there could never be a contract that purported to blur the two, but in general, that would be the distinction.

Mr. GRAYSON. All right. But this wasn't one of those blurry contracts, right? This contract provided for costs and for a fee, right?

Ms. MANUEL. That is my understanding, yes.

Mr. GRAYSON. Okay. So we are talking about at this point whether $25,000 for a Christmas party, $11,000 for coffee services, $3,000 for dinners, $3,000 for tee shirts and other apparel, and $112,000 for lobbying contracts could be spent as a fee, as part of

a fee that the company received, not as part of its allowable costs, correct?

Ms. MANUEL. That would appear to be the distinction that was made between there were—there were the things that were cost and were judged in terms of their allowability and then there was a separate management fee, and insofar as that is a true fee, that would not be subject to the rules regarding the allowability of cost.

Mr. GRAYSON. All right. So in essence, there are few, if any, restrictions under existing law for what you do with you fee. It is money in your pocket, right?

Ms. MANUEL. That would generally be correct, yes.

Mr. GRAYSON. Okay, and we don't generally dictate to people how they spend their own money, right? It is not a trick question. It is pretty basic.

Ms. MANUEL. Well, we are CRS. I am trying to think neutral and unbiased. I think that would generally be the case, yes.

Mr. GRAYSON. Okay. So are not going to normally engage in a war on Christmas here and tell people they can't spend their own money on Christmas parties, right?

Ms. MANUEL. Insofar as nothing in the contract, you know—it is denominated a fee and nothing in the contract purports to restrict or what other law purports to restrict how they use their fee.

Mr. GRAYSON. Okay. By the say, I am sending this clip to Bill O'Reilly, just so everybody is aware.

Listen, when Boeing gets a fee, Boeing gets a fee under many different government contracts, and in fact, earns profits under nongovernment contracts. Is that correct?

Ms. MANUEL. That is correct.

Mr. GRAYSON. And have you heard the phrase "money is fungible"? Is that a phrase you have heard before?

Ms. MANUEL. Yes.

Mr. GRAYSON. Okay. So what does that mean exactly, money is fungible?

Ms. MANUEL. It is going to mean there that once Boeing has earned its fee, it doesn't matter whether it was, you know, when Boeing is spending it that it was money that it got from the government or from some other source.

Mr. GRAYSON. All right. So what that means in essence is that since money is fungible, when a company, a human being, any entity receives cash and it is mixed in with other cash, it becomes basically untraceable at that point. Money is money. It is all green, correct?

Ms. MANUEL. That is correct.

Mr. GRAYSON. All right. So when we try to actually trace what happens to fees, we are doing something that is basically difficult, if not impossible, because money is fungible, right?

Ms. MANUEL. Insofar as you were talking about a true fee and something like the fees under the procurement contracts, then yes.

Mr. GRAYSON. All right. The reason why I am asking these questions and the reason why I am asking this way is because I don't want this Committee to become a scold. I don't want us to be taking it upon ourselves to investigate whether people drank alcohol at specific meals or whether they had a Christmas party.

I have a larger, bigger view of science and technology than that. I think of the sky and the stars, and I think of fusion power, and I think of all of the magnificent accomplishments that science has brought to us as a species, as human beings, and I don't want to be dragged down into the point where I am looking around and saying I am shocked, shocked that gambling is taking place in this establishment like in the movie Casablanca. I think we should aim higher than that. Thank you.

Chairman LOUDERMILK. The Chair now recognizes the gentleman from Ohio, Mr. Johnson.

Mr. JOHNSON OF OHIO. I thank you, Mr. Chairman, and I thank the panel for being with us today.

What we are talking about today is the responsible use of taxpayer dollars. I appreciated my colleague, Mr. Grayson's line of questioning. He said—if I am correct, he said we can't tell people what to do with their own money. Well, this is not their own money. This is the hard-earned tax dollars of millions of American people that are filling the coffer and we are talking about accountability on the use of that money and we are talking about transparency so the American people can see how that money is being used.

Dr. Buckius, in the NSF's proposed rule, it specifically lists a number of items including alcohol and non-business travel, non-business meals, luxury or personal items, and lobbying as examples of expenses that do not benefit NSF. Surprisingly, especially given the abuses by NEON, the NSF does not prohibit the use of management fees for these federally unallowable expenses. In your written statement, you indicate that management fees are not to be used for such purposes but the NSF proposed rule doesn't explicitly prohibit. Why are these expenditures not explicitly prohibited in NSF's proposed rule?

Dr. BUCKIUS. So are you referring to the past or future? So you have just been told that it is perfectly legitimate to——

Mr. JOHNSON OF OHIO. I am not talking about what is legal. I am talking about your proposed rule.

Dr. BUCKIUS. Okay. So what we are going forward with is a policy that will ensure that these things——

Mr. JOHNSON OF OHIO. Does the proposed rule explicitly prohibit the use of those things that you have indicated that are not appropriate?

Dr. BUCKIUS. It is proposed, remember. We are still taking comment on it.

Mr. JOHNSON OF OHIO. Does it explicitly prohibit and do you think it should?

Dr. BUCKIUS. Two different questions. I do——

Mr. JOHNSON OF OHIO. Well, let us answer the second one first because that is the easy one.

Dr. BUCKIUS. I think——

Mr. JOHNSON OF OHIO. Do you think it should?

Dr. BUCKIUS. I think it should.

Mr. JOHNSON OF OHIO. Okay. Well, great. Well, then let's discuss accountability for the use of management fees.

I have here an email from Timothy P. Kashmer of NSF to Tom Sheldon at NEON on January 8, 2009, and Mr. Chairman, I would

ask that that be entered into the record. And Mr. Kashmer says, "There is no rule or requirements for drawing down management fees for assistance awards. These are unauditable fees."

So do you agree that no one should be surprised that NEON used management fees as it did? By deeming the fees unauditable and informing NEON that there are no rules for their use, did NSF essentially signal NEON that it had carte blanche to use the fees in any way that they desired?

Dr. BUCKIUS. No, that is not true. So they proposed uses for the management fees that did not include the things that you just referred to, and we provided them management fees to do that. They went ahead and used it for things that were not in the list.

Mr. JOHNSON OF OHIO. On what basis do you think then it would be appropriate to conclude that the management fee is unauditable? I mean, is all NSF funding appropriated by Congress?

Dr. BUCKIUS. I am not a lawyer. I can't answer that one. Maybe—I guess the answer is yes.

Mr. JOHNSON OF OHIO. And is any of the money that is appropriated or that Congress gives to NSF, is any of it not appropriated?

Dr. BUCKIUS. I am sorry.

Mr. JOHNSON OF OHIO. My question is, how then, if this is appropriated money, how does it magically turn into non-appropriated money that is not subject to be audited?

Dr. BUCKIUS. Okay, Marty, you're going to have to answer this one.

Mr. JOHNSON OF OHIO. You can't do that by policy, I don't think.

Dr. BUCKIUS. But this is a fee. This is a management fee, and it has all of the——

Mr. JOHNSON OF OHIO. But it is appropriated money, correct?

Dr. BUCKIUS. Yes.

Mr. JOHNSON OF OHIO. Okay, and it is my understanding, Ms. Manuel, isn't all appropriated money from Congress subject to being audited?

Ms. MANUEL. I don't know about auditing per se but I do know with federal procurement contracts that contract—it is appropriated money that goes out the door in fees, and the general rule there has been that it is the contractor's money once they have earned the fee.

Mr. JOHNSON OF OHIO. Okay. All right.

Dr. Buckius, do you agree that regardless of a loophole in the law, that the use of taxpayer money on alcohol—and I think you have already said this—entertainment, lobbying is an unreasonable and inappropriate waste of taxpayer funds?

Dr. BUCKIUS. Our policy going forward after we receive comment will hopefully tell or have items in it that we would not want our grantees to be doing, and they include the things that you had previously listed.

Mr. JOHNSON OF OHIO. Dr. Collins, what do you think?

Dr. COLLINS. I would make the same point, that I did not agree with the way in which the funds were spent at that time, and going forward, we have already put policies in place that are consistent with your point.

Mr. JOHNSON OF OHIO. Okay. Thank you, gentlemen and ma'am, for answering my questions.

Mr. Chairman, I yield back.

Chairman LOUDERMILK. The gentleman yields back. The gentleman also has documents that he would like entered into the official record, and I ask unanimous consent that the documents be entered into the official record. Without objection, they are entered.

[The information appears in Appendix II]

Chairman LOUDERMILK. I now recognize the gentleman from California, Mr. Bera.

Mr. BERA. Thank you, Mr. Chairman. Thank you Ranking Member, and thank the witnesses for being here.

I think we all agree that one of our core jobs and responsibilities as Members of Congress is to make sure we are stewards watching the use of taxpayer revenue. I think we agree there.

From my perspective, the conversation here is about proper use of management fees versus the program goals of NSF and NEON, and I want to be very clear that I think most of us on the Science Committee, you know, many of us in the Minority clearly value the importance of NSF research and clearly understand the importance of programs and projects like NEON, which are incredibly important, particularly as the planet is changing, as biodiversity is changing. We have to be doing this research. I mean, in my home State of California, we are seeing rapid change to the environment. We are seeing record droughts that are dramatically affecting the biosphere. So again, this hearing is not about looking at NSF as a program and the value of that science or looking at the importance of programs like NEON, so let us be very clear that from my perspective, these are incredibly important programs.

That said, you know, when we—you know, I think in Dr. Buckius's opening statement, everyone can acknowledge that there may have been some inappropriate use of management fees, and on a looking-forward basis, you look back, you audit, you get a sense of where may have fees been used inappropriately, not breaking the law but perhaps lacking good judgment, and in an environment where folks are paying attention to how we are using the taxpayer revenue, Dr. Buckius, it is my understanding that again looking forward, analyzing how the funds were used in the past, NSF is rewriting the rules, rewriting the policy on what is appropriate use of management fee versus not appropriate use of management fees. Is that correct?

Dr. BUCKIUS. That is absolutely the case. We want to make sure, as I have said a number of times, that the taxpayer dollars are serving this country's interest in science and engineering and therefore we believe management fees are appropriate in order to make these kinds of efforts like NEON functional but we don't want them to be done—or to be expended in a way that doesn't really directly benefit the outcome of the research that we are trying to fund.

Mr. BERA. And if I play off the testimony of my colleague from Florida, Mr. Grayson, NEON is not the only program in the federal government that has appropriated funds that also then have management fees in there. So as we are looking at a single program, is it appropriate—NSF is one of the first agencies that is looking

at developing policy on the appropriate use of management fees versus not appropriate.

Dr. BUCKIUS. I can't answer for other agencies. I bet they are looking at them too. But yes, we are looking through all of our large projects like this one in order to make sure that we are all again investing in the right way.

Mr. BERA. So again, as we redefine what is appropriate use of the fee, let us not limit this look just to a single agency and a single program like NEON. You know, as Mr. Grayson pointed out, you know, Boeing, you know, other energy companies, et cetera gets lots of appropriated federal dollars, and I guess Ms. Manuel, in most of those awards and appropriated funds, is it accurate to say that there are management fees that are part of this?

Ms. MANUEL. If you are looking at something like Boeing, those are generally procurement contracts and they are not denominated management fees. They are known as some other type of fee.

Mr. BERA. Okay, but they are fees?

Ms. MANUEL. That is correct.

Mr. BERA. And there is no federal oversight over how those fees are utilized?

Ms. MANUEL. The primary sort of control, if you will, is that the contractor has to have earned the fees pursuant to the terms of the contract.

Mr. BERA. Okay. But once they earn those fees, they are free to use them however they want?

Ms. MANUEL. That is correct.

Mr. BERA. Again, what I would suggest is that we don't narrow in and focus in on a single agency, but as we are looking forward to be the best utilization of taxpayer dollars. You know, as NSF is going through their forward-looking proposals on how best to utilize those fees as well as what is appropriate use of fees, you know, there are probably lessons to be learned for other federal agencies and so forth. And you know, again, I applaud the fact that there is acknowledgement that there was poor judgment used and that NSF has taken proactive measures going forward to make sure that we can't dictate how someone uses their judgment but we can put in policies and procedures to minimize misuse of funds.

With that, I will yield back.

Chairman LOUDERMILK. The gentleman yields back, and the Chair recognizes the gentleman from Florida, Mr. Posey.

Mr. POSEY. I thank you very much, Mr. Chairman.

At the usual risk of being vilified as anti-science for any desire whatsoever to have some accountability and some transparency and be a little bit of a watchdog over taxpayers' money, I think it is appalling to many of us that so many employees at the agencies obviously look at the federal budget and taxpayers' money as some kind of big pińata. When you see them spending $150,000 on liquor, parties, lobbyists, I mean, that is the conclusion that my constituents back home would be drawing, and they would say what are we doing about that, and so my question, have you recovered any of the money that apparently obviously clearly was inappropriately spent?

Dr. BUCKIUS. So let me agree with you as a taxpayer that I want our dollars to benefit this country, but as we have been told, these

expenditures or management fees on these kinds of things is perfectly acceptable. I argue poor judgment. I intend to try to make this change going forward. But so far, they are perfectly legal.

Mr. POSEY. And so NEON apparently shamelessly defends them?

Dr. COLLINS. As I have said in my testimony, the individuals involved in making these decision could have used better judgment, and going forward from here, we put in place policies that——

Mr. POSEY. I heard you say that, but if I ripped you off, I would expect that you would say hey, I want my money back, and I think you have ripped off the National Science Foundation and I think the honorable thing to do would be to say hey, we are going to give you your money back.

Dr. COLLINS. Well, to reiterate Dr. Buckius's point, and as Mr. Grayson explained, your characterization that NEON had ripped off NSF would not accord with the fact that these fees were provided in a way that were not restricted, and we may disagree with how they were used when in fact they were used in a way that was consistent with OMB 122.

Mr. POSEY. Well, that is pure doubletalk. I don't think we would be here if it was appropriate behavior of any kind. On the one hand, you are saying it is appropriate. On the other hand, you are saying it is inappropriate, we are not going to do it again. I mean, I am just shocked by the answer, so——

Dr. COLLINS. I don't want to characterize it as appropriate, as I have said. I don't think it was invested in the right way but it was consistent with——

Mr. POSEY. Well, if you spent money that the government entrusted to you do to thing A and you did it on thing B, which was totally a selfish personal indulgence for which it was never intended, should not have been intended and you admit it should not future ever be intended, don't you think it would be appropriate to pay the money back? I mean, just as a matter of fair play. Forget the political doubletalk, the bureaucratic doublespeak, just in fairness, in the real world.

Dr. COLLINS. Well, as I said, I am not a lawyer and I don't have the expertise to characterize that, but the way in which——

Mr. POSEY. I am not asking for legal opinion. I am just talking, if you were one of my constituents, you would say hey, if they spent the money like they weren't authorized to spend it and it was inappropriate, I mean, who could possibly think the National Science Foundation gave you 150,000 bucks to spend on liquor, parties and lobbyists. I mean, does anyone in your agency believe that that is the correct use of the money?

Dr. COLLINS. At this point, no.

Mr. POSEY. Okay. So don't you think in all fairness you just give the money back to begin with?

Dr. COLLINS. Well, the funds were invested in a way that were consistent——

Mr. POSEY. That is not invested. Invested in liquor, parties and lobbyists, and I love your explanation of lobbyists to—what did you say, to help educate Congressmen on the validity of your agency? I think the first thing if you wanted Congress to be respectful of your agency is give the government back the money you cheated them out of.

Dr. COLLINS. Well, again, just to repeat, I don't feel that the government was cheated out of the money.

Mr. POSEY. Well, if was of no benefit to the government. We have established that. It was never intended to be spent on liquors, parties and lobbyists. We have established that. So you got the money. If you planned to do that in the beginning, you took it under false pretenses. If you—otherwise it was just a matter of deception and misuse of money, of taxpayers' money that was entrusted to you to do public good.

Dr. COLLINS. It would be important to stick with the distinction that Mr. Grayson has made and Ms. Manuel has made in terms of the way in which the fees, management fees, can be used as opposed to appropriated funds, and the management fees came without specific stipulation. Now, going forward we have put very clear stipulation on the way in which those funds can be used that are absolutely consistent with the spirit that you are trying to bring forth here, and I agree with the spirit that you are bringing forth here.

Mr. POSEY. Well, you don't agree with the spirit I am bringing forth because you don't have advocate repaying the government for the money.

Dr. COLLINS. Well, I don't think the agency is in the position to pay back that money because in fact the funds have been expensed and they were used in a way that was consistent with the policy at the time.

Mr. POSEY. At the time, because there really was no policy. Is that what you are saying?

Dr. COLLINS. There was not the guidance that went down to the specific level that you have been——

Mr. POSEY. And everybody thinks you should be able to spend taxpayers' money on liquor, parties and lobbyists, right? That is a pretty common perception. Is that a common perception in your agency?

Dr. COLLINS. It is not a common perception in NEON, and as I said, it is not my perception and it is not the decision I would have taken, but it was the decision that was taken at the time.

Chairman LOUDERMILK. The gentleman's time is expired. The Chair now recognizes the gentleman from Virginia, Mr. Beyer.

Mr. BEYER. Thank you, Mr. Chairman. Thank you, witnesses.

I think it is important to recognize the worthiness of the NEON Project and, you know, the climate is changing quickly and dramatically in ways that are affecting or will affect our lives, and the NEON project offers the capability to give us the data we need to make wise decisions for the American people. So I am happy that NSF and NEON are already taking concrete steps to implement the audit's findings.

But Dr. Collins, we have heard about some of the controversial expenses paid out of NEON's management fee account. What are some of the less headline-grabbing expenses you charged to the management fees and do you have other sources of income? For example, if you wanted to pay back the $150,000 for the party and the lobbying, could you? And in paying for the lobbying, what was the purpose of hiring lobbyists? How does that help the mission of NEON and the American public?

Dr. COLLINS. Well, as I said, to take your last question, in terms of the lobbying, it helps the mission as far as providing an explanation for the importance of this sort of investment and this sort of facility.

Now, the other kinds of things in which the fees are used would be, for example, on helping to pay for visas for leading scientists who would come to the country and work in this NEON Project.

The other detail that you raised as far as other sources of funds, there are membership fees that come from universities that are members of the NEON Incorporated, the corporation overseeing the NEON project.

Mr. BEYER. Could you in theory use those membership fees from universities to repay the liquor bills for the board meetings?

Dr. COLLINS. I am not a financial expert and I honestly do not know whether those funds, again, to use a phrase that came up earlier, are completely fungible.

Mr. BEYER. How many employees does NEON have?

Dr. COLLINS. 350 right now with a variable group that comes on in the summer of about 100 to 150 temporary employees.

Mr. BEYER. Is it not an important part of management leadership to create a culture within an organization where people work together and are mutually supportive of and committed to larger goals?

Dr. COLLINS. I would argue that it is extremely important in any group and especially one as large as NEON.

Mr. BEYER. Do holiday parties sometimes help with that function?

Dr. COLLINS. It has been my experience in 25-some-odd years of administration that holiday parties can help with that.

Mr. BEYER. And if you didn't pay for the holiday party out of the management fee, how would you pay for it?

Dr. COLLINS. Well, there would be no way by which the corporation could pay for it. You would have to do it by contributions from individuals.

Mr. BEYER. If I can address Ms. Manuel for a minute, is there a legal difference in the ability of agencies to set limits on how fees are managed by nonprofits as opposed to how the profits are spent by other procurement agencies—the Boeing you mentioned earlier? And will we ever have a right to ask how Boeing spent their profits on holiday parties and lobbying?

Ms. MANUEL. I think a distinction potentially could be made insofar as you are talking about different types of agreements and it is very clear with procurement contracts what types of fees are allowed and what has to be done by the contractor to earn them. It is much less clear when you are talking about management fees under a cooperative agreement what determines the amount of the fee and what makes it payable to the contractor.

Mr. BEYER. Is the profit that a major for-profit contractor like Boeing makes, is that taxpayer money?

Ms. MANUEL. It is.

Mr. BEYER. I yield back, Mr. Chairman.

Chairman LOUDERMILK. The gentleman has yielded back. The Chair now recognizes the gentleman from California, Mr. Knight.

The gentleman has no questions. I recognize the gentleman from Michigan, Mr. Moolenaar. No questions.

I believe that is the extent of the questions that we have. First, I want to thank the witnesses for their testimony. I think it has been enlightening and will help this Committee as we go forward.

As I indicated earlier, we have a higher responsibility in the positions that you and I and those that are on this panel have because we are not just dealing with money, we are dealing with the dollars that taxpayers have sent to us and we have a higher fiduciary responsibility to use those in a wise and reasonable fashion that actually affects the outcome of the purpose of which the taxpayers have sent us the money, and if there are loopholes, which I think we have identified that there may be—the expenditures have been identified as poor judgment, $25,000 on holiday parties that was from taxpayers, that—I apologize for that. If there are loopholes which we have identified that there clearly may be loopholes, then it is the requirement of Congress, the people have sent us here, to make sure that those loopholes are closed and that taxpayer monies are spent in a responsible fashion.

The record will remain open for two weeks for additional comments and written questions from Members, but before the Members are excused, I have been advised that Mr. Moolenaar does want to ask a question. The gentleman is recognized for five minutes.

Mr. MOOLENAAR. Thank you, Mr. Chairman. My apologies. I had a budget meeting that I needed to attend and was not able to hear some of the testimony, but I appreciate you being here, and I have been listening to some of the discussion, and I guess my question is for Dr. Buckius.

There is a—NASA and OMB have a policy that indicates that it always that costs under federal awards must be reasonable, allocable and allowable, and NASA indicates that paying business expenses, costs that are not reimbursable through a management fee would be circumventing the OMB guidelines and therefore inappropriate, and I just wonder how you would reconcile your position with the position of those agencies.

Dr. BUCKIUS. So other agencies do not have the same practices that we do. As I started off in the testimony, there are different attributes of the various agencies. Ours is one where we support extramural research. We don't have physical facilities. So we have reviewed many of the other agencies' practices and we are going to adjust ours as we go forward, but that doesn't mean we will necessarily do exactly as they do simply because we are just a different agency, we have different functions.

Mr. MOOLENAAR. Do you think that those policies make sense from their standpoint?

Dr. BUCKIUS. I can imagine in their case where they might come to that conclusion, and we have talked about our posting in the Federal Register so we are taking input right now and so—and we are going to close in a couple of weeks so that we can actually then consider all these options.

Mr. MOOLENAAR. Do you see any problem with the policies that they have?

Dr. BUCKIUS. For the reasons that we have talked a little bit, management fees do serve a very important function for activities of nonprofits like NEON, and so curtailing, restricting, zeroing will cause a lot of inflexibility that we see could give us some problems but we do want to take a look at what other people do to ensure that we have got all sides of that.

Mr. MOOLENAAR. Thank you, Mr. Chairman. I yield back.

Chairman LOUDERMILK. The gentleman yields back.

I just want to make sure every Member has ample opportunity to ask questions in this first and final round of questioning.

Again, I have made a closing statement but I will reemphasize how important it is that we be extra cautious and transparent with the expenditures of taxpayer money.

I want to again thank the witnesses for your valuable testimony, Members of the Committee for attending, and your questions, and at this point the witnesses are excused and the meeting is adjourned.

[Whereupon, at 11:24 a.m., the Subcommittees were adjourned.]

# Appendix I

ANSWERS TO POST-HEARING QUESTIONS

ANSWERS TO POST-HEARING QUESTIONS

*Responses by Dr. Richard Buckius*

**HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY**
**SUBCOMMITTEE ON OVERSIGHT**
**SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY**

**"NSF's Oversight of the NEON Project and Other Major Research Facilities Developed Under Cooperative Agreements"**
**QUESTIONS FOR THE RECORD**
**Dr. Richard Buckius, Chief Operating Officer, National Science Foundation**

**Questions submitted by House Science, Space, and Technology Oversight Subcommittee Chairman Barry Loudermilk and Research and Technology Subcommittee Chairwoman Barbara Comstock**

**1. Did anyone at NSF specifically tell NEON that the management fees were unauditable?**

**Answer:** A review of NSF's records indicates at least one instance where the NSF Grants Officer responsible for initial award and administration of the NEON cooperative agreement, Mr. Tim Kashmer, indicated to NEON that management fee was unauditable. In a January 8, 2009, e-mail, Mr. Kashmer stated to Mr. Tom Sheldon, NEON, that "There is no rule or requirements for drawing down management fees for assistance awards. These are unauditable fees, therefore as far as we are concerned you can draw down the entire amount of the fee, but probably a good idea to keep it monitored into a separate account."

The position by Mr. Kashmer that management fee was unauditable is consistent with our understanding of federal policy associated with profits or fees. OMB Circular A-122, *Cost Principles for Non-Profit Organizations*, applicable at the time of award but since superseded by the *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200)(Uniform Guidance),* states specifically that: "Provision for profit or other increment above cost is outside the scope of this Circular."

Concerning the drawing down of fee, NSF is implementing policies that will not allow the awardee to draw down the entire amount of fee at one time, but instead allows awardees to draw down management fee in proportion to costs incurred during the performance period.

**2. What is your procedure for oversight on how the taxpayer money is spent in all of NSF's 42,000 active awards, including how often are the awards reviewed? –**

**Answer:** NSF carries out its mission primarily through the award of grants and cooperative agreements (CAs). CAs, a special form of grant, are used if substantial involvement is expected of the awarding agency beyond that of routine monitoring and technical assistance. Consistent with the Federal Grant and Cooperative Agreement Act, the principal purpose of CA is the transfer of something of value to a recipient to carry out a public purpose or stimulate activities that are not for the direct benefit of the Federal Government. By contrast, contracts are used when the funded activity is securing something of direct benefit or use by the Federal Government. Federal statutory requirements for grants and CAs are governed by the *Uniform*

*Guidance* and OMB Circulars; the *Federal Acquisition Regulations* (FAR) sets these requirements for contracts, including instruction to the federal agency.

NSF monitors each of its 42,000 active awards using a risk-based protocol and a set of mature oversight procedures. As detailed in the attached standard operating guidance (SOG), each recipient organization and award is subject at least annually to NSF baseline monitoring activities. Supplementary advanced monitoring, i.e., either a site visit or a desk review, is applied to those recipients identified in the annual risk assessment. The Foundation's commitment to stewardship over taxpayer investments is evidenced by its emphasis on promoting the optimal and efficient use of resources, as well as integrity, transparency, and highest standards of performance in administration, business processes, management, and oversight.

GRANTS MANAGEMENT MODEL

The Foundation's grants management model consists of a growing, comprehensive portfolio of accountability efforts that broadly addresses NSF's programmatic and business performance. These efforts span the six life-cycle stages of an award – proposal submission, merit review, pre-award efforts, post-award monitoring, award close-out, and audit and follow-up – and represent a collaborative effort of NSF program and administrative offices.

Accountability activities across the grants life-cycle (see Attachment 1) identify NSF programs that have been broadly recognized for excellence. These programs include: NSF merit review, automated systems, and risk-based monitoring (highlighted in yellow). A dynamic infrastructure supports accountability efforts throughout the grants life-cycle; it is depicted at the bottom of the table (highlighted in blue). This infrastructure capitalizes on the expanding capability of electronic business systems and information management to implement business rules that strictly enforce federal regulations as well as agency-specific policies and procedures.

PRE-AWARD MONITORING

Pre-award efforts play a significant role in NSF oversight and touch every award submitted to NSF from communications with the potential awardee community that strengthen competition and ensure transparency through pre-award oversight by program offices and NSF grants administrators. Essential to these efforts are:

- Program announcements/solicitations/descriptions set programmatic and administrative requirements.
- Merit review ensures a fair, competitive, transparent, and in-depth review of proposals against National Science Board (NSB) criteria of intellectual merit and broader impacts. Strict attention to conflicts of interest (COI) ensures impartiality and is enforced/ documented through NSF IT systems.
- Award recommendations by NSF Program Officers (POs) are based on the outcomes of merit review, special program considerations, and alignment of project scope with overall budget. The level of review depends on project size and complexity; large-scale projects may be subject to site visits or reverse site visits before award recommendations are finalized.
- Funds obligation is the sole responsibility of Grant Officers (GOs) who review business, financial, management, and other non-research aspects of proposals, and set financial and/or programmatic terms and conditions to the awards. New potential awardee institutions receive a financial capability review; potential awards with budgets of $10 million or more are reviewed by NSF Cost and Financial Analysts.

POST-AWARD MONITORING OVERVIEW

Critical to post-award review is oversight by NSF program offices in reviewing scientific progress. *Research Performance Progress Reports (Annual/Final)* are required of all NSF Principal and co-Principal Investigators (PIs/co-PIs). Failure to submit timely reports delays processing of additional funding and administrative actions on any active award for all identified PIs and co-PIs. NSF IT Systems block processing as long as reports are outstanding. For final reports, lack of timely submission delays NSF review and processing of any pending proposals for all identified PIs and co-PIs on the given award. (See NSF *Awards and Administration Guide* (AAG), (NSF 15-1), Section II.D.)

NSF uses a structured, coordinated approach to identify and mitigate risks across its award portfolio, particularly those risks associated with institutions that may not possess the capacity to manage awards. This effort results in an assessment of an institution's grant management capacity; targets monitoring efforts on specific areas of concern; and provides business assistance to help institutions improve their capacity to manage awards more effectively. (See Attachments 2 and 3)

Risk-based portfolio management provides assurance that awardees are capable of administering grants and cooperative agreements in compliance with federal regulations and NSF policies. Elements of this approach include:

- *Annual Risk Assessment* across NSF's award portfolio estimates the comparative level of risk associated with NSF awards managed by an institution and determines the type of advanced monitoring activity to implement. Each award is assigned a weight denoting its risk as a function of award factors (size, complexity), institutional factors (organization type, experience in grant administration), prior monitoring activities (recency, compliance issues), and recommendations from NSF administrative and/or program offices.
- *Baseline monitoring* touches all NSF awards, verifying that institutions implementing these awards comply with federal regulations and the terms and conditions of NSF award agreements. It identifies exceptions and potential issues that require immediate or further scrutiny through advanced monitoring.
- *Advanced Monitoring* is used to develop reasonable assurance that institutions managing higher-risk awards possess adequate policies, processes, and systems to properly manage federal funds. As further detailed in the attached, NSF advanced monitoring activities include Business System Reviews of large facilities awards; on-site and virtual visits of research award recipients; and desk reviews.

OTHER OVERSIGHT ACTIVITIES

NSF engages in a number of other activities that provide oversight to NSF projects and programs broadly defined. Integral to these activities are:

- *Resolution of External Audits.* Annually, NSF is engaged in the resolution of approximately 12 NSF OIG audits and approximately 260 Single Audits of awardees that expended more than $750,000 in federal expenditures in the previous year. Single Audits are independent audits required under *Uniform Guidance* (2 CFR 200, Subpart F). NSF resolves all questioned costs and administrative- and policy-related findings, and engages in follow-up to verify implementation of relevant corrective actions on the part of awardees.
- *Committee of Visitors (COV) Reviews.* COVs are conducted every three years for each major NSF program. These reviews engage external experts in (1) assessing the quality and integrity of program operations and program-level technical and managerial matters

related to proposal decisions and (2) commenting on how outputs and outcomes of supported research contribute to NSF's mission and strategic outcome goals.

**3. In 2011, the Department of Defense adopted guidelines which addressed management fees for unallowable costs. They implemented an annual review, which evaluates what the management fee was used for and whether it was consistent with what was represented by the awardee when requested. In addition, if it is determined that the fee was used for purposes other than what was agreed upon, both the amount and the need for the fee could be challenged.**

**However, the NSF's December 30, 2014 proposed guidelines for management fees do not require an annual review and the remedy for violating the agreed upon use is a reduction in future management fees. In light of the abuses by NEON that the NSF has described as "disconcerting," should NSF move immediately to an approach that parallels DOD's?**

**Answer:** NSF's proposed management fee policy, which was published in the December 30, 2014 *Federal Register* for public comment, was heavily influenced by DoD's policy. We believe that the policy closely parallels DoD's approach for addressing management fee. NSF does take an approach consistent with DoD of providing for periodic reviews of management fee use, but allows for some level of flexibility in the timing of the review. NSF did not include a specific timeframe for the periodic review of management fee use by awardees because it was determined that the timeframe for reviews would be more appropriately addressed in implementing procedures that were separately developed by the Agency. Those implementing procedures, established as Division of Acquisition and Cooperative Support Standard Operating Guidance (SOG) 2015-1, *Negotiation, Award and Payment of Management Fee*, state specifically that:

> "Grants and Agreements Officers shall also perform periodic reviews of management fee usage under an award. Unless a different timeframe is established based on a decision by the Chief, Cooperative Support Branch, based on an analysis of historic information on use of fee, the review will take place annually. In no circumstance will the time between reviews exceed two years. Repeated, unexplained failure to reasonably adhere to planned uses of fee may result in reduction of future management fee amounts under the award."

NSF is planning the publication of a finalized revision to the agency's management fee policy that would state that as a term and condition of the award the awardee will be required to provide information (typically annually) on the actual use(s) of management fee.

NSF's approach is consistent with DoD's approach in that if it is determined that the fee was used for purposes other than what was agreed upon, both the amount and the need for the fee could be challenged.

**4. The Department of Defense and other federal agencies require an independent cost proposal audit before executing a cooperative agreement and annual independent cost-incurred audits thereafter for projects of $50+ million? Proceeding without resolution of cost proposal audit issues and conducting major project "reviews" on an as-needed**

**basis pose significant risks for taxpayers. When a sole-purpose non-profit is involved, there is no means of recovering taxpayer funds spent inappropriately. Will NSF revise its policies to independent audits for $50+ million projects?**

**Answer:** Based on our review of federal regulations associated with financial assistance agreements, we have no indication that a requirement exists to perform independent cost proposal audits or annual independent cost-incurred audits thereafter for projects of $50+ million.

NSF agrees that proceeding with an award without the resolution of cost proposal audit issues does propose a risk. However, the following must be considered:

Based on DCAA audits that it had commissioned, the NSF OIG identified what it termed as unallowable costs associated with the proposals for three major projects (NEON, the Ocean Observatories Initiative (OOI), and the Advanced Technology Solar Telescope (ATST), now named the Daniel K. Inouye Solar Telescope (DKIST)), however, this information was only provided to NSF after these awards had been made. Suspending the awards pending resolution of the audit information would have resulted in schedule and cost delays to the projects. Instead, NSF proceeded to disposition the audits following the guidelines set forth in the Agency's audit resolution process, understanding that any costs questioned through the audits and sustained by the Agency could be resolved through subsequent modification to the awards. Ultimately, of approximately $305 million in questioned costs raised through the audits associated with these three projects, only approximately $19.8 million was sustained by the Agency for potential reductions in the award amount, resolving the audit (these sustained costs were associated with the NEON project). It is important to note that this amount did not constitute unallowable incurred costs by the organization, but instead constituted differences in projected costs necessary to complete the NEON project. This resolution was set forth in a NSF Audit Resolution Memorandum that was forwarded to the Office of the Inspector General for coordination per the agency's implementation of OMB Circular A-50 on April 8, 2014. The OIG accepted this proposed resolution on January 30, 2015. Completion of the effort to renegotiate the estimate for the NEON award is pending based on the need to obtain an independent assessment of the revised estimate as committed by NSF to the OIG.

Concerning the question of conducting major project reviews on an as needed basis, we are not clear on the specific reviews referenced, however, NSF, like other federal agencies, often conducts periodic reviews and assessments of in-process awards.

NSF disagrees with the statement that "When a sole-purpose non-profit is involved, there is no means of recovering taxpayer funds spent inappropriately." All financial assistance agreements are subject to federal requirements to ensure proper oversight of funds. NSF, like other federal agencies, reimburses organizations for costs incurred under federal awards that are determined to be allowable, allocable, and reasonable under federal cost principles. NSF has controls in place to prevent the reimbursement of costs that are unallowable under federal cost principles. To ensure the proper accounting of funds in accordance with federal standards, NSF looks to the provisions of the Single Audit Act of 1984. Pursuant to that Act, and as directed by Congress and the Office of Management and Budget, NSF relies on the work of non-Federal auditors performing annual OMB-prescribed A-133 audits which constitute the federal standards for performing audits of states, local governments, and non-profit organizations. These audits help ensure compliance with federal requirements and are designed to provide adequate assurance that funds under federal financial assistance awards are properly spent.

Additionally, NSF supplements these legislatively mandated and OMB-required audits with other post-award monitoring activities that the agency undertakes, such as accounting system reviews, formal business systems reviews covering internal controls for financial and other business functions, site visits including the examination of cost records, and indirect cost rate reviews that are part of the agency's obligation to establish indirect rates under certain awards for which it is the cognizant audit agency.

Finally, specific to the last question, NSF has not revised its policies to require independent audits for projects with an estimated cost of $50 million or more. We are aware of no federal requirement that would mandate such a policy. We are also not aware of other federal agencies with such a policy. Instead, NSF has implemented procedures for the review of cost proposals that require that the Agency consider the need for pre-award cost proposal audits on a case-by-case basis dependent upon the circumstances of the award. This approach is consistent with the DCAA Audit Manual. NSF has also undertaken new additional cost control measures under large facility construction projects to provide additional assurance that awards only include amounts for allowable costs. As part of these strengthened procedures, NSF will now obtain full formal audits of awardees' accounting systems and practices prior to entering into future large facility construction cooperative agreements totaling $100 million or more in those cases where NSF is the cognizant agency and where such an audit has not been performed within the past two years. In addition, NSF has strengthened requirements set forth in the Agency's *Large Facilities Manual* for prospective large facility awardees to provide adequate documentation of cost estimates at gateway reviews and throughout the project. These requirements, and the recently implemented requirement to obtain independent cost reviews by outside parties prior to the award of large facility construction projects, are designed to provide NSF management with additional confidence in the estimated total project costs for these awards.

**5. At the Committee's December, 2014 hearing, the NSF Inspector General (IG) questioned the budgets for four major research projects, "While NSF knows what it will spend on these projects, it is not clear whether it knows what they will cost." Under the auspices of the IG, there were apparently three attempts at a cost proposal audit of the NEON project. The last of these was completed and set forth $154 million in undocumented or questionable costs. Nevertheless, NSF went ahead and approved the project at the full amount without documenting resolution of any of these amounts. Other federal agencies, including science agencies, reconcile independent cost proposal audits before finalizing construction costs. Why doesn't NSF do this? Will NSF commit to a change in its current policies and resolve significant issues raised by cost proposal audits before awarding major facilities' grants?**

**Answer:** It is important to note that the subject audit had been commissioned by the NSF OIG and not by the Agency, and as stated above the results of the audit were not provided to NSF until after the NEON construction award had been made. NSF had conducted a separate review of the NEON cost proposal prior to making the award. Suspending the NEON award pending resolution of the audit issues would have resulted in schedule and cost delays. Instead, NSF proceeded to disposition the audits following the guidelines set forth in the Agency's audit resolution process, understanding that any costs questioned through the audits and sustained by the Agency could be resolved through subsequent modification to the awards. Ultimately of costs questioned through the audit, $19.8 million were sustained by the Agency for potential reductions in the award amount, resolving the audit. It is important to note that this amount did not constitute unallowable incurred costs by the organization, but instead constituted differences in projected costs necessary to complete the project. This resolution was set forth in a NSF Audit Resolution Memorandum that was forwarded to the NSF OIG for coordination per

the agency's implementation of OMB Circular A-50 on April 8, 2014. The NSF OIG accepted this proposed resolution on January 30, 2015.

**6. Management fees are authorized by the funding agency when a non-profit organization has no other source of revenue to defray unallowable costs that are considered to be necessary and ordinary requirements for doing business. However, according to the NSF Inspector General's November 24, 2014 memorandum, during the last five years almost $5 million was awarded in management fees to six awardees – excluding NEON – and *all* of them had multiple sources of income. If this is true, please explain why NSF would award a management fee when there is another source of revenue to cover unallowable project costs?**

**Answer:** NSF's past practice for reviewing management fee proposals did not include the specific written requirement that management fee would only be authorized when an awardee had no other source of revenue to cover certain necessary costs that may not be reimbursable under the governing cost principles. NSF has re-examined the Agency's new management fee policy requiring consideration of other sources of income. NSF has determined that a management fee may be authorized for awards in the limited circumstances of financial assistance awards for construction or operations of a large facility as the responsible organization is likely to incur certain legitimate business expenses that may not be reimbursable under the governing cost principles. NSF provides for management fee in these limited circumstances, as appropriate, recognizing that the awardee would only incur such expenses as a result of its support of the NSF-funded activity. Such reimbursement would be appropriate even in situations where the organization has other sources of revenue.

**7. The NSF indicates in their proposed rule that it uses management fees as a "financial incentive" and to "obtain and retain high caliber staff." However, according to the NSF's Inspector General, these factors are already covered with award or incentive fees.**

**a. Can you please explain if -- and why -- management fees are paid as financial incentives? To enable the fee recipient to recruit and retain high caliber staff?**

**Answer:** NSF considers payment of a management fee for a highly limited subset of awards, all dependent on advanced scientific knowledge and technical expertise that is not readily found in a commercial marketplace. The objective of these awards is the support of cutting-edge scientific research. It is paramount that awardees have the flexibility to obtain and retain the best minds in this regard. NSF notes that use of management fee for providing financial incentives to obtain and retain high caliber staff warrants careful consideration. Selected items of cost identified in the Uniform Guidance allow for some aspects of these types of expenses, but not all. For example, where an employee who has received allowable relocation expenses resigns within 12 months after hire, the awardee is required to refund or credit the Federal share of the cost to the Federal Government. Under such circumstances, that repayment would not be covered as an allowable cost or even later as an indirect cost. Therefore, funds available for repayment would be limited and use of management fee may be appropriate. Providing a housing allowance for a project executive that may be on assignment at another location is another example of an expense that would not be covered by the cost principles but may be ordinary and necessary.

**b. What is the range of salaries and benefits paid to the top leadership at NEON? How are those salaries justified? Is the opportunity to lead singular research efforts relevant to recruitment and retention of professional staff?**

**Answer:** As of February 25, 2015, NEON, Inc.'s top leadership salaries range from $175,695 to $304,741 (see Table below). NEON, Inc.'s top leadership receives additional benefits for medical, dental, and vision coverage in accordance with eligibility criteria covering all NEON employees, including 6% retirement plan contribution. Benefit levels range from $7,433 to $15,696 (see Table below).

Table: NEON Annual Salaries by Job Title

| Job title | Annual Salary as of February 25, 2015 | Annual Benefits as of February 25, 2015 |
|---|---|---|
| Chief Executive Officer | $304,741 | $15,696 |
| Observatory Director | $234,000 | $11,486 |
| Project Manager | $234,000 | $13,737 |
| Chief Financial Officer | $213,717 | $13,175 |
| Chief Human Resources | $213,462 | $13,168 |
| Chief of Education and Public Engagement | $203,825 | $10,651 |
| Chief of Strategic Alliances | $175,695 | $7,433 |

NEON, Inc. maintains and administers established policies and practices to justify compensation, which includes surveying the labor market for the types of positions it has and establishing pay rates based on what is competitive for recruitment and retention in the relevant labor market. Currently, NEON, Inc. uses data from the Radford Technology Survey; the Pearl Meyer Chips One; Mountain States Employers Council for Colorado, Wyoming, Arizona, New Mexico; and the Economic Research Institute. The compensation data provided by these surveys allows NEON, Inc. to find relevant salary information from at least one source for most positions. For unique or hybrid positions NEON, Inc. utilizes Occupational Information Network or relevant small firm or niche salary surveys conducted by position of related associations or professional membership groups.

NEON, Inc. employs professional staff who are engaged in scientific research. For several professional scientific staff positions, a demonstrated record of leading research efforts is required as part of their formal job duties and would be essential to their recruitment and retention by NEON, Inc. Most scientific, engineering, and professional staff employed by NEON, Inc., however, are not required to lead singular research efforts as part of their formal job duties; such opportunities, therefore, would not be relevant to recruitment and retention.

**8. In an October 1, 2014 response letter to Senators Grassley and Paul, the NSF asserted, "NSF does *not* provide this [management] fee on an incurred cost basis." However, NEON's first request for a management fee to the NSF was for the exact amount of the unallowable expenses that it incurred. How is this not providing a management fee on an incurred cost basis?**

**Answer:** Except for one item of cost as noted below, NEON represented in its request to NSF for management fee that the fee was for potential and anticipated costs, not for incurred costs. On December 8, 2008, NEON, Inc. formally requested payment of a management fee to the organization for work under the NEON construction award. NEON, Inc. represented to NSF that the proposed management fee would be used for specific purposes, including: (1) Contract Terminations and Losses, (2) Outreach Activities, (3) Personnel Related, and (4) Business Meals/Others. NSF reviewed and approved the request consistent with our practice of allowing the payment of a management fee for, among other purposes, coverage of non-reimbursable costs deemed necessary for operations. Of the $190,000 in management fee requested by NEON, all items of cost except for $11,000 were represented as potential and anticipated costs. The $11,000 requested was proposed by NEON to reimburse the NEON membership fee account which was used to cover the cost of canceling a scheduled vendor conference.

**9. In an October 1, 2014 response letter to Senators Grassley and Paul, the NSF indicated that a "management fee represents the parties' agreement as to a fixed amount constituting a fee or profit earned by the awardee."**

**a. Given that NEON is a non-profit entity, under what authority is it appropriate for NSF to pay a "profit" to a non-profit organization?**

**Answer:** The *Uniform Guidance* (2 CFR 200.400(g)) states that "[t]he non-Federal entity may not earn or keep any profit resulting from Federal financial assistance, unless explicitly authorized by the terms and conditions of the Federal award." In addition, available guidance on accounting for non-profits makes it clear that non-profit earnings are "profit." NSF determined that given the nature of the NEON cooperative agreements, management fees were appropriate and expressly allowed in the terms and conditions of the award.

**b. What specifically has NEON done to earn a fee or a profit above and beyond consideration negotiated in the cooperative agreement?**

**Answer:** NSF cooperative agreements provide for cost reimbursement for allowable direct and indirect costs. In the limited subset of awards (currently 14 out of roughly 53,000 active awards) where NSF provides management fee, it does so not because the fee is earned as a reward. Rather, NSF provides it recognizing that there are legitimate expenses an awardee may encounter that are not covered by the cost principles. The Federal Government has recognized the validity of providing fee to cover these types of concerns for at least half a century, dating back to the Kennedy Administration and the Bureau of the Budget Committee's report on "Government Contracting for Research and Development," commonly called the Bell Report.

**10. In 2011, NSF concluded its Business Systems Review for NEON. As part of that review, NSF stated that it reviewed NEON's entire Policies and Procedures Manual. Included in that manual is a form, dated September 29, 2009 and entitled "Pre-Approval of Unallowable Expenditures." This form provides check-boxes for expenses including alcohol, entertainment and lobbying, and the accompanying policies instruct NEON employees to fill out the form to request payment of these unallowable expenses with taxpayer funds.**

**The Business Systems Review did not make any mention of NEON's proposed use of**

**taxpayer funds for alcohol, entertainment, or lobbying. Given that this form was included in the documents that NSF specifically stated it examined in the Business Systems Review, why was no action taken at the time to prohibit NEON from spending taxpayer funds on these "disconcerting" expenses"?**

**Answer:** The Business Systems Review process did identify and review this form, which was used to ensure that such costs were not categorized as allowable direct costs, but rather covered by NEON private funds. Management fees collected from NSF awards are considered NEON private funds by law. We believe that this position is consistent with testimony provided at the February 3rd Hearing by the Congressional Research Service (CRS). Specifically, our copy of the written testimony provided by the CRS for the February 2nd Hearing states that:

> The payment of fees to a procurement contractor is generally governed by the terms of the contract regarding the "earning" of these fees, not the allowability of costs. Moreover, once the fees have been paid, the funds are generally seen as indistinguishable from the contractor's other funds, and may be used in any way that is permissible under generally applicable laws. The same could potentially be said of any fees paid to a non-federal entity under a cooperative agreement, although it should be noted that federal law could sometimes restrict what a recipient of federal funding may do with its own money.[1]

Prior to implementation of NSF's new policy, use of fee was discretionary with no specific limitations. Going forward, NSF has now published specific written policies on use of management fee and NEON has already agreed to adopt them. NEON's business practices and forms will be modified accordingly.

**11. The Byrd Anti-Lobbying Amendment prohibits all applicant and recipients of Federal contract, grants, loans, and cooperative agreements from using funds appropriated by acts of Congress for lobbying.**

**NEON disclosed in its publically-available income tax returns that it was expending funds on lobbying that exceeded the amount of its nonpublic funds. It further stated that the purpose of those lobbying expenditures was to attempt to influence members of Congress by "develop[ing] ... a targeted appropriations strategy to attract support for NEON" and "draft[ing] letters to members of congress ... to advocate NEON's objectives."**

a. **Did NSF ever review NEON's publically-available income tax returns?**

**Answer:** NSF personnel did not review NEON Inc.'s income tax returns; however, NSF personnel did review NEON, Inc.'s Lobbying Certification as required by the lobbying restrictions common rule adopted by Federal awarding agencies in 55 *Federal Register* 6736. The common rule requires non-Federal entities who request a Federal award exceeding $100,000 to complete this certification. This certification states that the non-Federal entity must complete the "Disclosure Form to Report Lobbying", if they use unappropriated to influence or attempt to influence an officer or employee of any agency in

[1] For example, non-profit social welfare organizations that are tax exempt under 26 U.S.C. §501(c)(4) are restricted from engaging in "lobbying activities" if they receive a federal grant, award, or loan (2 U.S.C. §1611). This prohibition extends to any lobbying activities, including those undertaken with private funds. *See id.*

the connection with the Federal award. NEON, Inc.'s Chief Financial Officer certified their compliance with the requirements and standards on lobbying costs in OMB Circular A-122 for fiscal years 2008-2013.

**b. Do you believe that OMB (Office of Management and Budget) has given you the authority to disregard the Byrd Amendment and pay NEON's lobbying expenses with taxpayer funds?**

**Answer:** The Byrd Anti-Lobbying Amendment ("Byrd") provides limitations on the use of appropriated funds to influence certain Federal contracting and financial transactions. In accordance with the Act, the Office of Management and Budget (OMB) provided government-wide guidance regarding its implementation. Consistent with that guidance, profits and fees are excluded from the limitations imposed by the Byrd amendment...(see 1990 *Federal Register* notice, which states that "[p]rofits, and fees that constitute profits, earned under Federal grants, loans, and cooperative agreements are not considered appropriated funds" (55 *Federal Register* 24540, 24542 (June 15, 1990)). Nevertheless, NSF's new policy on use of management fee specifically provides that fees should not be used to support lobbying as set forth in the *Uniform Guidance* (2 CFR 200.450).

**12. When did NSF first learn of NEON using federal funding for alcohol, parties, and lobbying?**

**Answer:** During a Business System Review that was conducted in 2011, NSF became aware that some portions of the management fee had been used on these types of expenses. There were discussions with NEON concerning the uses; however, it was determined at the time that management fees expenditures were outside the purview of the cost principles. In 2013, NSF obtained more detailed information on NEON, Inc. fee usage during the audit resolution process. Given the fee usage by NEON, Inc., NSF denied both a request for an increase in NEON's management fee under the current construction award in 2013, and a fee under the early operations award, pending resolution of this matter.

Beginning early in 2013, NSF initiated action to review its management fee practices and assess what alternatives were available to it in conducting its audit resolution activities. NSF staff conducted research on the issue including review of other agencies policies and practices and interviews with other agency personnel. Several draft versions of internal guidance concerning negotiation and award of management fee were produced and debated internally.

These efforts resulted in the management fee policy published in the *Federal Register* on December 30, 2014 and corresponding internal implementing guidance issued January 2, 2015. Regarding the latter, NSF determined that management fee represented an element above cost not subject to audit review, and that awards of any future management fee amounts would take into consideration NEON Inc.'s previous use of fee.

This resolution was set forth in NSF's Audit Resolution Memorandum that was forwarded to the Office of the Inspector General for coordination per the agency's implementation of OMB Circular A-50 on April 8, 2014. The OIG accepted this proposed resolution on January 30, 2015.

**13. Most of the expenses you stated as "ordinary and necessary" in your written testimony have to do with credit and capital budgeting. The intent of these expenses seems to be to provide the grantee with cash for use between the date it expends**

**money on its projects, and the date that the Government reimburses it for those expenditures.**

a. **Can grantees receive payments from NSF electronically *before* they expend any cash?**

**Answer:** Yes. NSF policies on financial requirements and payment are set forth in NSF Award and Administrative Guidance (AAG), *III.C.2.a*, "[a]dvance payments to grantees must be limited to the minimum amounts needed and be timed to be in accordance with the actual, immediate cash requirements of the grantee in carrying out the purpose of the approved program or project. The timing and amount of advance payments must be as close as is administratively feasible to the actual disbursements by the grantee for direct program or project costs and the proportionate share of any allowable indirect costs. When making a payment request, grantees must certify that all disbursements have been made, or will be made, within three days of the receipt of the payment in accordance with the terms and conditions of the award."

Grantees may submit requests for payments as often as they like and are authorized to receive payments from NSF in advance of costs incurred provided that the following conditions exist: (i) [f]unds for the project period have been obligated by a Grants and Agreements Officer in the form of a signed grant; (ii) [t]he grantee has established written procedures that will minimize the time elapsing between the transfer of funds from the U.S. Treasury and their disbursement by the grantee; and (iii) [t]he grantee's financial management system meets the standards for fund control and accountability prescribed in OMB *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (2 CFR § 200.302). NSF may restrict a grantee's capability to request funds when grantees do not meet these conditions or when otherwise considered appropriate.

b. **NEON's log of management fee expenditures does not seem to show one dollar for capital budgeting expenditures. The only ordinary and necessary item paid for with management fee money seems to be late fees – and that accounts for a just few thousand dollars out of $1.7 million in fees. Would you please review the NEON log and calculate the total amount of management fee expended for necessary and ordinary business expenses?**

**Answer:** NSF conducted an initial review of NEON, Inc.'s log of management fee expenditures. Although the log provides brief descriptions of the expenditure transactions, there is not enough detail and support to make a determination of whether the expenses are consistent with NSF's new policy and, further, calculate the amount expended for necessary and ordinary business expenses.

Management fees are an item above cost, therefore – NSF did not require NEON, Inc. to report how those monies were expended. As an item above cost, management fee is not subject to audit. This position is consistent with testimony provided at the February 3rd Hearing by the Congressional Research Service (CRS). Additional time is needed to coordinate with NEON, Inc. and gather the necessary information to conduct a thorough analysis of the management fee expenditures.

c. **Why did NSF continue to pay a management fee that eventually totaled $1.7 million when even a cursory scan of the NEON log of expenditures revealed relatively few unallowable costs that could be considered ordinary and necessary**

**business expenses?**

**Answer:** Although NSF has issued new policy providing more definitive guidance on use of management fee provided under financial assistance agreements, management fee is an item above cost, and is not subject to audit. This position is consistent with testimony provided at the February 3rd Hearing by the Congressional Research Service (CRS). Specifically, our copy of the written testimony provided by the CRS for the February 2nd Hearing states that:

> The payment of fees to a procurement contractor is generally governed by the terms of the contract regarding the "earning" of these fees, not the allowability of costs. Moreover, once the fees have been paid, the funds are generally seen as indistinguishable from the contractor's other funds, and may be used in any way that is permissible under generally applicable laws. The same could potentially be said of any fees paid to a non-federal entity under a cooperative agreement, although it should be noted that federal law could sometimes restrict what a recipient of federal funding may do with its own money.[2]

We further note that our analysis of NEON Inc.'s use of fee has determined that documentation is not clear thus it is also not clear whether the expenses can be considered to be an inappropriate use of fee. For example, expenditures related to meals and food items may have been appropriate if related to business purposes and reasonable, however documentation concerning this matter is not clear.

**d. Does the NSF review actual management fee expenditures for any of the non-profits with which it has cooperative agreements?**

**Answer:** In the past NSF has not reviewed management fee expenditures for any of the non-profits that have received such fees under cooperative agreements. This has been consistent with NSF's understanding that fees are payments of amounts above cost and not subject to audit. This position is consistent with testimony provided at the February 3rd Hearing by the Congressional Research Service (CRS). Going forward, NSF is adopting new policy requiring the periodic review of management fee expenditures to examine the extent to which awardee fee proposals have proven reliable when compared with actual uses of management fee. Repeated, unexplained failure to reasonably adhere to planned uses of fee will result in reductions of future management fee amounts under an award.

**14. Does the NSF directly perform <u>independent</u> audits of any of its programs?**

**a. Does the NSF ever engage an independent auditor to undertake performance or efficiency audits of NSF projects?**

**Answer:** Primary responsibility for the conduct of independent audits of NSF awardees has historically rested with the NSF OIG. Pursuant to the Inspector General Act Amendments of 1988, the NSF OIG has the responsibility and authority to conduct and supervise audits and investigations of NSF programs and operations, including organizations that receive NSF

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[2] For example, non-profit social welfare organizations that are tax exempt under 26 U.S.C. §501(c)(4) are restricted from engaging in "lobbying activities" if they receive a federal grant, award, or loan ( 2 U.S.C. §1611). This prohibition extends to any lobbying activities, including those undertaken with private funds. *See id.*

funding. Annually, NSF provides its OIG recommendations of awardees that, in the view of NSF program and/or administrative staff, would benefit from additional scrutiny. In recent years NSF management and the OIG have entered into an agreement under which NSF may commission audits directly with other audit entities, but this has been used under very limited circumstances and primarily for cost incurred audits. In addition, under the *Uniform Guidance* (Subpart F) all non-federal entities that expend $750,000 or more in federal funds during the preceding fiscal year must have a single or program-specific independent audit. The scope and reporting requirements under these audits address such items as internal controls; questioned costs; compliance with federal statutes, regulations, and federal awards terms of conditions; and follow-up on prior audit findings. Those single audits with findings relevant to NSF are resolved by NSF Management (or its designee).

**b. Do you agree that some form of independent audit oversight of major NSF projects would lend credibility to the oversight process?**

**Answer:** Independent oversight, including audits, naturally lends additional credibility to programmatic accountability efforts. NSF does, however, support a number of evaluation efforts conducted by external subject matter experts that provide independent layers of program and project assessments. First, Committee of Visitors (COV) panels, assembled on a three-year cycle for major programs, engage subject matter experts in assessing the quality and integrity of program operations; program and administrative matters related to project funding decisions; and the alignment of program outputs and outcomes with NSF's mission and strategic outcome goals. Second, program-level reviews conducted by third-party evaluators generally focus on program impacts, including contributions to science, societal impact, broadening participation, and best practices. For programs supporting large-scale efforts (e.g., centers, state-wide infrastructure, institutional reform) such evaluations often provide analysis down to the project level. A third form of independent review by subject matter experts involves large-scale and complex projects that have management plans calling for periodic reviews (often in the form of Site Visits or Reverse Site Visits) to address scientific performance, as well as the managerial and operational aspects of their efforts. In the case of NSF large facilities projects, such program activities would complement Business System Reviews (BSRs) referenced in earlier responses above.

**15. The DCAA auditors were unable to match the NSF method for calculating contingency with that used by any other federal agency. This was cited as a major factor in reaching the conclusion that the cost proposal for NEON was not a fair and reasonable one.**

**a. Are you aware of any other federal agency, including another science agency that uses the NSF methodology? Has OMB reviewed and approved the NSF methodology?**

**Answer:** Yes, other federal agencies that support facilities construction (most notably DOE and NASA) now support the use of modern probabilistic approaches to estimating budget contingency. NSF's revised contingency policy completed the OMB-required public comment period on January 6, 2015. Final OMB review is planned for March 2015 with approval targeted for May 2015. NSF's new policy is in full compliance with OMB's *Uniform Guidance* (2 CFR 200), Section 200.433.

**b. Did the NSF provide special software to NEON to estimate contingency?**

**Answer:** No.

**c. How are contingency amounts calculated?**

**Answer:** There are a variety of acceptable, industry-wide methods for calculating contingency. In the past, NSF gave far less guidance with regard to contingency calculation methodologies, which led to a wide range of products and challenges with evaluation. Moving forward, NSF gives clear and concise guidance on favoring the modern, probabilistic approach as well as specifying how contingency is defined and managed in the revised *Large Facilities Manual* (LFM), Section 4.2.5. A more complete description of NSF's preferred methodology can be found in the revised *LFM, Quantitative Risk Analysis – Estimating Contingency,* Section 5.2.8.

**d. Rather than providing a means for recognizing predictable variations in certain budgeted cost items during a multi-year construction period, which is the approach taken by other federal agencies, NSF's method of calculating contingency appears to create a reserve account from which the non-profit developer could draw for any unanticipated increases in budgeted costs as well as any unbudgeted costs-without approval from NSF unless a six-figure limit was exceeded for a single item. Under this approach, are contingency expenditures auditable? How does NSF review and assess the appropriateness of contingency expenditures? How can NSF assure Congress and taxpayers that its major research facilities are constructed at the lowest necessary cost?**

**Answer:** NSF methodology does not create a reserve account.

As clarified by OMB through the *Uniform Guidance,* a distinction is made between including contingency as part of budget estimating for large, complex activities such as large facility construction projects, which is permissible, versus payments made to an organization's contingency reserve, which are not. Please see response below to Question 2 from Ranking Member Johnson for additional information.

Contingency dollars are not separately identifiable after they are incorporated into a specific Work Breakdown Structure (WBS) element following a risk being realized and appropriate approvals made. All contingency allocations go through a documented change control process that has various approval thresholds, with NSF approval being required at a certain level. NSF approval thresholds vary based on the nature and stage of the project. A sufficiency review of current NSF approval thresholds was recently completed, the results of which will be reported to the NSF OIG.

The contingency management and use process is auditable, including all allocations of contingency. Miscommunications on how NSF budgets and manages the use of contingency has led to the NSF OIG's audit team to review the materials under a different framework. NSF has greatly strengthened and standardized the contingency use reporting process in the monthly project reports to facilitate this kind of audit in the future. The monthly reports are closely scrutinized by Program and the Large Facilities Office with a particular emphasis on contingency use.

**16. What has been, and what is, the NSF's written, internal policy for a potential conflict**

**of interest when working on a project at NSF and then subsequently accepting a position of Chief Executive Officer of said project?**

**Answer:** NSF's policy follows the Government-wide Standards of Ethical Conduct for Employees of the Executive Branch, specifically Subpart F at 5 CFR 2635.602, which governs seeking other employment. That Subpart contains a disqualification requirement that applies to employees when seeking employment with persons whose financial interests would be directly and predictably affected by particular matters in which the employees participate personally and substantially. It addresses the requirement of the financial conflict of interest statute, 18 U.S.C. 208(a), that an employee disqualify himself from participation in any particular matter that will have a direct and predictable effect on the financial interests of a person "with whom he is negotiating or has any arrangement concerning prospective employment." Beyond this statutory requirement, the regulation requires disqualification from particular matters affecting the financial interests of a prospective employer when an employee's actions in seeking employment fall short of actual employment negotiations.

a. **Did Dr. Collins, now CEO of NEON, have any input in NSF's decision to move forward with the NEON project while he was the NSF Assistant Director of Biological Sciences? In addition, did he have any input on the final budget or use of management fees for the NEON project?**

**Answer:** Note that Dr. Collins is the Chair of the NEON Board of Directors, not the Chief Executive Officer. This is a non-salaried position, except for an annual stipend ($5,100) provided to each Board member for attendance at three NEON Board of Directors meetings per year.

The solicitation establishing the initial NEON matter (NSF 04-549) was issued on March of 2004, before Dr. Collin's appointment as Assistant Director of the Directorate for Biological Sciences (AD/BIO). While Dr. Collins was AD/BIO, he did have input into several preliminary NEON matters. But actual approval of required funding actions for design or concept and development awards was done by the Executive Officer, NSF Directorate for Biological Sciences.

The NEON construction award itself was funded in August of 2011. The initial operations for NEON, Inc. were funded in September of 2012. As these matters arose after Dr. Collins had left NSF (October 2009), he did not have any input into either the final budget or the use by NEON, Inc. of management fees.

b. **If so, does it appear as though there is a conflict of interest with Dr. Collins moving from his previous position at NSF to become the CEO of NEON?**

**Answer:** No, it does not. Again, Dr. Collins is not the CEO. He is the chair of the NEON Board of Directors, a non-salaried position.

Dr. Collins was AD/BIO from September of 2005 to October of 2009. Dr. Collins became a member of the NEON Board of Directors in January of 2012, more than two years after his

departure from NSF. He subsequently became Chairman of the Board of Directors in January of 2013.

The Government-wide Post-Employment Restrictions, at 18 USC 207, do not prohibit an individual who previously worked for the U.S. Government from going to work for any outside entity, even when that individual dealt with the same entity while working for the Government.

**Question Submitted by Rep. Gary Palmer**

**1. In 2008, NEON cancelled a lease with the Heinz Center that wasn't legally binding, but NSF approved a $50,000 cancellation fee request out of the management fund.**

a. **Would you please explain why taxpayers were on the hook for $50,000 on a non-binding agreement?**

**Answer:** The parties, including NSF, believed that the letter of intent to the Heinz Center may have been considered a legally binding agreement, whereas, NEON, Inc. would be on the hook for the entire $100,000 and without the ability to occupy the space for the limited time of 12 months. Therefore, NSF found it necessary and reasonable for NEON, Inc. to use its management fee for the purpose of payment of the cancelation fee. There was no binding agreement at the time that NEON, Inc. entered into a letter of intent with the Heinz Center. However, subsequent communications created ambiguity on the matter. Due to NEON Inc's need to occupy the Heinz Center offices for a short period of time and the need to resolve a dispute on the cost of the renovations that took place because of NEON, Inc.'s written notification to the Heinz Center to occupy the two offices for a longer period of time, the parties entered into good faith negotiations to resolve this matter before it went as far as going to court for resolution. Further explanation of the lease cancelation is explained below.

In July 2007, NEON, Inc. entered into a "Letter of Notification" with the Heinz Center indicating that NEON, Inc. intended to occupy renovated office space at the Heinz Center for long-term duration beginning in 2008. Based on this letter, the Heinz Center undertook in good faith renovations to host NEON, Inc. In 2008, business management employees of NEON, Inc. were located in Washington, DC and NEON, Inc. was establishing an office in Boulder, CO to host the project design and management employees. However, after further review of the costs associated with two separate offices, NSF determined that support for two offices would be unnecessary and unreasonable.

Although the parties had not yet entered into long term agreements, it appears reasonable, based on the one year lease costs, that supporting the two offices in DC for NEON Inc. would have cost NSF approximately $50,000 per year which would have resulted in costs of approximately $300,000 to date and would be an ongoing indirect cost expense.

In May 2008, NSF notified NEON, Inc. that it must locate all of its employees in one location and that this requirement would be a condition of a pending award for NEON design. NSF permitted NEON, Inc. a twelve-month period during 2009 to complete the move and close all offices in Washington, DC. NEON, Inc. notified the Heinz Center of this decision and that it would be moving its entire staff to Boulder, CO. On September 2008, due to NEON's change of plans subsequent to NSF's decision, the Heinz Center submitted an invoice to NEON, Inc. in the amount of $100,000 for costs incurred for renovating the office space to NEON specifications and for costs to re-design the space to make it rentable.

From June 2008 to December 2008, NEON, Inc. and the Heinz Center negotiated a leasing arrangement that met the NSF criteria to close all offices in the Washington DC area. NEON, Inc. decided it would rent the Heinz Center for one year for its remaining communications and strategic staff in the amount of $50,000 and pay a $50,000 lease cancellation fee (see Attachment 4). In December 2008, NSF concurred with NEON, Inc.'s request to enter into a twelve-month lease of the Heinz Center renovated office space (see Attachment 5).

Both NEON, Inc. and the Heinz Center entered in good faith into an agreement to establish a NEON, Inc. office at the Heinz Center. The Heinz Center proceeded with renovations based on that agreement. It was NSF that required NEON, Inc. to close all Washington, DC offices and move all employees to one location. As a result of the NSF requirement, NEON, Inc. notified the Heinz Center that it could not honor the agreement to enter into a long-term lease. Given it was the Agency's requirement to consolidate all staff in a single location, it appeared to NSF that a lease cancellation fee was appropriate.

**Questions Submitted by Ranking Member Johnson**

**1. The Inspector General has been at odds with NSF over how to handle cost estimates and how to handle contingency in a project since at least 2011. From your testimony it appears that you have taken some of the Inspector General's concerns to heart. During the hearing we had a brief exchange about some of the steps NSF has undertaken to be responsive to the IG. Please provide a more detailed answer about the steps you've taken over the last 2-3 years with respect to large facilities policy and management, including cost-estimating and contingencies. Please include a description of the audit resolution process for contingencies. What facilities policy and management reviews or reforms are still underway at NSF?**

**Answer:** In addition to established cost monitoring controls, NSF has undertaken new additional cost control measures under large facility construction projects to provide additional assurance that awards only include amounts for allowable costs. As part of these strengthened procedures, NSF will now obtain full formal audits of awardees' accounting systems and practices prior to entering into future large facility construction cooperative agreements totaling $100 million or more in those cases where NSF is the cognizant agency and where such an audit has not been performed within the past two years. In addition, NSF has strengthened requirements set forth in the Agency's Large Facilities Manual for prospective large facility awardees to provide adequate documentation of cost estimates at gateway reviews and throughout the project. At each stage gate review (Conceptual Design, Preliminary Design, and Final Design), NSF will conduct an agency cost assessment of the Awardee's cost proposal, appropriate for that level of project maturity. A standardized Cost Proposal Review Document (CPRD) will be populated by the various oversight and assurance divisions and offices within NSF (including Program) to develop both the National Science Board-approved Estimated Total Project Cost (TPC) as well as for the final cost estimate to be included in the financial assistance award. The CPRD will also include inputs from one of eight types of Independent Cost Assessments recognized in the GAO guide prior to the final design stage gate review.

Typically, proposal audits are provided to cooperative agreement officials prior to the negotiation of a final award; agency officials use this information to make a final decision, which resolves any proposal budget audit recommendations. This process would be applied to the resolution of any issues associated with contingency estimates.

Post-award, estimated costs to complete the project will be evaluated at annual project reviews and through the normal oversight process. NSF is also strengthening its requirement for cost estimate preparation by Awardees to facilitate reviews and development of the CPRD. All of the changes have (or will) be codified in the NSF Large Facilities Manual.

These requirements, and recently implemented requirements to increase documentation of the review of awardee proposals and to obtain independent cost reviews by outside parties prior to the award of large facility construction projects, are designed to provide NSF management with additional confidence in the estimated total project costs for these awards.

NSF has also strengthened its policies and procedures on contingency estimating, management and use in the revised *Large Facilities Manual*.

**2. The Inspector General appears to have a different reading of the OMB uniform guidance than the agency does. Specifically, she points to paragraph (c) of Section 200.433 to argue that the agency should maintain full control over the contingency reserve unless and until the actual costs are incurred, rather than handing management of the contingency fund to the project management, e.g. NEON, Inc. How do you believe we are to understand the OMB guidance that, on the face of it, seems to support both the agency's and the IG's position on contingencies?**

**Answer:** Contingency estimation, which is a long standing project management practice that has been addressed in numerous professional publications, has recently been addressed by OMB's *Uniform Guidance* (2 CFR 200). Per the OMB guidance, contingency is that part of a budget estimate of future costs, typically of large construction projects, IT systems, or other items approved by the Federal awarding agencies, which is associated with possible events or conditions arising from causes, the precise outcome of which is indeterminable at the time of estimate, and that experience shows will likely result in additional costs for the approved activity or project.

Although NSF has, in the past, typically included contingency estimates in large facility construction awards, the OIG has disagreed with the amounts being included. For example, disagreements have arisen between NSF and the NSF OIG around what constitutes acceptable budgeting practices for contingency. There is a fundamental difference between the concepts of responsibly budgeting for contingencies (using a risk-based methodology to estimate variations in established allowable construction costs under the cost principles) and the cost of paying into a general, non-specific contingency reserve. The latter is a separate cost category that is unallowable. OMB has recently clarified the difference between the two concepts. The OIG has taken a different interpretation of OMB policy and has extrapolated the term "certainty requirement" contained in the OMB guidance to mean that all costs associated with contingency estimates must be known in advance as to their time, intensity, and assurance of happening. This is not a position taken by the Agency, nor is it consistent with accepted best-practices.

In several audits, the OIG has cited the contingency provision of the former *Cost Principles for Educational Institutions* (OMB Circular A-21) (2 CFR 220), and concluded that proposal budgets did not meet the certainty requirement of the aforementioned cost principle, nor did the estimate rest on adequate supporting documentation. However, as noted above, OMB has recently addressed these matters explicitly in publishing the *Uniform Guidance* and the rule-making process. OMB noted that the text addressing the use of contingency budgets in federal awards included in the proposed rule represented a clarification, not the adoption of a revised cost principle. As clarified by OMB through the *Uniform Guidance,* a distinction is made between including contingency as part of budget estimating for large, complex activities such as large facility construction projects (see paragraph (b) below), which is permissible, versus payments made to an organization's contingency reserve (see paragraph (c) below), which are not. Thus, the OMB *Uniform Guidance,* 2 CFR §200.433, is determinative in this matter:

> "(b) It is permissible for contingency amounts other than those excluded in paragraph (b)(1) of this section to be explicitly included in budget estimates, to the extent they are necessary to improve the precision of those estimates. Amounts must be estimated using broadly-accepted cost estimating methodologies, specified in the budget documentation of the Federal award, and accepted by the Federal awarding agency. As such contingency amounts are to be included in the Federal Award ..."
> "(c) Payments made by the Federal awarding agency to the non-Federal entity's "contingency reserve" or any similar payment made for events the occurrence of which

cannot be foretold with certainty as to the time or intensity, or with an assurance of their happening, are unallowable ..."

Efforts to resolve disagreements between the OIG and the NSF Office of Budget, Finance and Award Management on this matter, including through re-audit of the three major research facility projects, failed to resolve differences on whether amounts for contingency estimates were appropriate for inclusion in award budgets. Based on this impasse, and in accordance with federal policies set forth by OMB for resolving differences between agencies and audit organizations such as Offices of Inspectors General, recommendations made by the OIG concerning contingency estimates as well as other matters associated with cost management oversight of major research facility projects, were escalated to the Agency Audit Follow-up Official in May 2014. The escalated recommendations were first reviewed by Dr. Cora Marrett, then Deputy Director of NSF, as the Agency Audit Follow-up official, and subsequently were re-evaluated by Dr. Richard Buckius, Chief Operating Officer, when he assumed that role. In October 2014, after review of the documentation provided on the matter, in his capacity of Agency Audit Follow-up Official, Dr. Buckius determined that NSF's practices on estimating and using contingency estimates properly follow OMB guidance by including the contingency in the award. The determination that contingency estimates be included in budget proposals for major research facility awards included consideration of the recently clarified guidance from OMB. The updated OMB policy guidance also explicitly states that except for certain restrictions that NSF is compliant with, amounts for contingency estimates may be included in financial assistance awards.

**Attachment 1**

**Table. Accountability Components by Award Life-Cycle Stage**

| Life-Cycle Stage | Financial Capability/ Accomplishment | Non-financial Compliance | | Research Performance |
|---|---|---|---|---|
| | | Administrative | Programmatic | |
| Proposal Submission & Development | | *Research.gov, FastLane, eJacket*<br><br>Proposal Submission | Alignment with Program Goals & Objectives | |
| Merit Review | | | NSF Merit Review - Implementation | NSF Merit Review - Outcomes |
| Pre-award | Financial Review of New Institutions<br><br>Budget Review of All Awards of $10 Million or Greater | Automated Compliance Checks (e.g., human subjects, vertebrate animals, responsible conduct of research, post-doctorate mentoring) | Program- and/or Project Specific Requirements<br><br>Program Management Plans<br><br>Award Negotiation, Assessment of Project-specific Terms & Conditions | Pre-award (Reverse) Site Visits<br><br>Award Approval Delegation by Dollar Threshold (Division, Assistant Director, Director's Review Board, National Science Board) |
| Post-award Monitoring | Financial Baseline Monitoring<br><br>Advanced Monitoring<br><br>Grants & Agreement Monitoring<br><br>Automated Report Screening | Monitoring of Financial and Administrative Terms & Conditions | Monitoring of Program & Project-specific Terms & Conditions<br><br>Monitoring of Annual & Final Progress Report Receipt/Approvals | Annual & Final Progress Report Approvals<br><br>Project Outcome Reports<br><br>Program Reviews / Evaluations<br><br>Committees of Visitors of Major Programs (3-year cycle)<br><br>(Reverse) Site Visits |
| Award Close-out | Financial Close-out Review | | Non-financial Close-out Review | |
| Audit/Follow-up | Office of the Inspector General and Single Audits<br><br>Follow-up to Corrective Action Plans | | | |
| IT Systems (*Research.gov, FastLane, eJacket, iTRAK, Award Cash Management $ervice*), Business Intelligence Tools, Data Warehouse | | | | |
| Business Systems Rules | | | | |
| Policies, Procedures, Federal Regulations, Program and Project-specific Requirements | | | | |

NOTE: NSF programs broadly recognized for excellence are highlighted in yellow; the infrastructure supporting accountability efforts throughout the grants life-cycle are highlighted in blue.

## Attachment 2

### Detailed Description of Post-Award Monitoring Activities

***Baseline monitoring*** efforts entail the involvement of NSF Program Officers (POs) and Grants Officers (GOs) in approval of a prescribed set of for post-award actions that mandate prior approval by NSF. (See NSF *Awards and Administration Guide* (AAG), (NSF 15-1), Section II.A.2 and Exhibit II-1)

NSF's IT systems play an increasingly important role in baseline monitoring:

- *Research Performance Progress Reports (Annual/Final)* are required of all NSF Principal and co-Principal Investigators (PIs/co-PIs). Failure to submit timely reports delays processing of additional funding and administrative actions on any active award for all identified PIs and co-PIs. NSF IT Systems block processing as long as reports are outstanding. For final reports, lack of timely submission delays NSF review and processing of any pending proposals for all identified PIs and co-PIs on the given award. (See NSF *Awards and Administration Guide* (AAG), (NSF 15-1), Section II.D.)
- *Award Cash Management $ervice (ACM$)* processes payments at the award-level and results in near real-time access to financial data, fund status, and expense reports. Cash requests made after expected close dates or exhausting unliquidated balances are identified and reviewed; payment thresholds control access to funds or stop payments. .
- *Financial Close-out* requires awardees to submit final project reports and final cash draws to *ACM$* within 90 days of award expiration. Monthly, awards with large unliquidated balances about to expire are reviewed and awardees notified. For closed awards, *ACM$* generates automatic warnings for all payment adjustments of $25,000 or more; adjustments over $25,000 are reviewed to verify compliance with the award's terms and conditions and to ensure that costs are reasonable, allowable, and allocable.

***Advanced Monitoring*** is used to develop reasonable assurance that institutions managing higher-risk awards possess adequate policies, processes, and systems to properly. (See Standing Operating Guidance (BFA 2015-1), *BFA Post-Award Monitoring,* Attachment 3)

- *Business System Reviews (BSRs)* provide oversight of the suite of business systems (people, processes, and technologies) supporting administrative management of NSF's major multi-user facilities and facility construction projects. Subject matter experts define the scope and conduct the review, which can encompass up to eight core business systems. Annually, about six institutions participate in these complex, oversight efforts.
- *Site Visits (SVs)* are conducted by teams of NSF Grants Officers and Cost and Financial Analysts to assess awardees' capability, performance, and compliance with administrative regulations, public policy requirements, and award terms and conditions. The scope of the review focuses on a range of issues from management, financial systems, and adequacy of policies/procedures documentation to specific cost areas. NSF identifies concerns and outlines specific issues that awardees must address. NSF tracks the status of awardees' implementation of mutually agreed-upon remedies. Annually, NSF conducts 30 SVs.
- *Desk Reviews (DRs)* provide information to assess awardees' capacity to manage federal awards. These include a review of institutional policies and general management practices, as well as assessments of the adequacy of accounting and financial systems. Annually, NSF conducts approximately 120 DRs.

**Attachment 3**

# National Science Foundation
# Office of Budget, Finance, and Award Management (BFA)
# Standing Operating Guidance (SOG)

## BFA 2015-1

| | |
|---|---|
| **Issuance Date:** | January 14, 2015 |
| **Applicable Organizations:** | All Divisions and Office of Large Facilities |
| **Award Types:** | Grants and Cooperative Agreements |
| **Supersedes:** | BFA 2014-1 |
| **Governing Policy:** | N/A |
| **Subject:** | BFA Post-Award Monitoring |
| **Issuing Division:** | BFA Division of Institution and Award Support |

## Summary of Changes

This SOG revision for Fiscal Year (FY) 2015 updates NSF portfolio-specific information including the award composition and the total value of NSF-funded awards. In addition, BFA 2015-1 has been updated to include information regarding changes to the Foundation's monitoring tools and practices.

**Attachment 3**

## Table of Contents

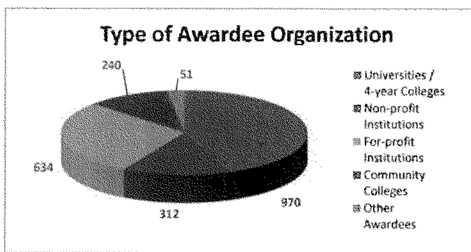
**Attachment 3**

# 1 Purpose

This Standing Operating Guidance (SOG) document provides an overview of the National Science Foundation's (NSF's) approach to monitoring its grant and cooperative agreement award portfolio. It describes the Office of Budget, Finance, and Award Management's (BFA's) award monitoring approach and outlines the activities undertaken to ensure that awardee institutions administer federal funds in compliance with federal regulations and NSF policies and procedures. This document is intended to provide guidance to BFA staff and serve as a consolidated reference of existing documents for the financial and administrative procedures and activities for BFA post-award monitoring.

# 2 NSF's Award Portfolio Background

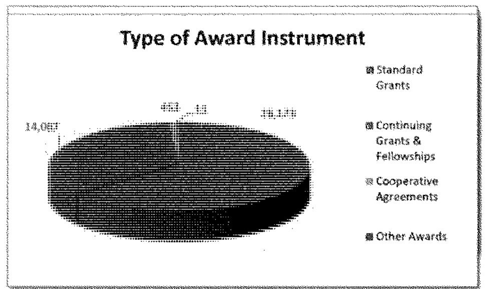
As of June 30, 2014, the total value of NSF-funded active research to "promote the progress of science; to advance the national health, prosperity, and welfare; and to secure national defense" was approximately $27.4 billion with 40,644 awards issued to 2,207 institutions.[1] NSF's awardees include universities/four-year colleges (higher education), non-profit organizations, for-profit organizations, community colleges, school districts, tribal colleges, and foreign institutions or international organizations. Higher education institutions, non-profit organizations, and for-profit organizations received approximately 98 percent of NSF grants and cooperative agreements. Many of NSF's awardees receive more than one NSF award, as well as awards from other federal agencies.




[1] All award portfolio information in this document is based on awards issued with NSF appropriations to organizations through June 30, 2014.

**Attachment 3**

Although it issues awards to 2,207 institutions, NSF is the cognizant agency for 94 awardees for which it is the predominate federal funding entity. NSF's awards ranged from $1,000 to $600 million. Approximately 75 percent of NSF awards are under $500,000. Slightly more than 1 percent of NSF's awards exceed $5 million. Some of NSF's larger awards are for the funding of large research facility construction and operations. NSF funds research and education in most fields of science and engineering. The majority of the funding provided in support of these endeavors is accomplished through the award of grants and cooperative agreements. Cooperative agreements are typically more complex than grants and inherently require more NSF involvement and monitoring than research grants. To effectively oversee its award portfolio, NSF has implemented a structured, coordinated approach to identify and mitigate a broad array of risks, particularly risks associated with institutions that may not possess the capacity to manage their awards in accordance with applicable statutes, policies, and procedures. NSF's approach includes a combination of forward-looking measures developed to assess an institution's grant management capacity, targeted monitoring efforts designed to evaluate specific areas of concern, and business assistance to help institutions improve their capacity to more effectively manage awards.




## 3 Award Monitoring Overview

Implementation of BFA's post-award monitoring activities is a shared responsibility among the Division of Institution and Award Support (DIAS), Division of Grants and Agreements (DGA), Division of Financial Management (DFM), Large Facilities Office (LFO), and Division of Acquisition and Cooperative Support (DACS). To ensure appropriate monitoring, NSF has defined areas of coordination and follow-up among each of the BFA organizations.

NSF has developed a risk-based portfolio management approach to ensure that awardee institutions administer grants and cooperative agreements in compliance with federal regulations and NSF policies. With the goal of managing risk and providing broad oversight coverage of its award portfolio, NSF identifies the risk associated with individual awards and the institutions that manage them and utilizes that information to plan and manage its annual oversight activities. BFA's award monitoring approach includes three interrelated areas of activity that, taken together, comprise NSF's Award Monitoring Program:

- **Annual Risk Assessment** – NSF conducts an annual risk assessment of the awards and awardee institutions within the portfolio to determine the comparative level of risk for each awardee. This assessment assists NSF in making decisions about the type of monitoring activity to implement for each institution receiving NSF funding. For example, the DIAS Cost Analysis and Audit Resolution (CAAR) Branch uses the results to select awardees for advanced monitoring desk reviews and site visits.

## Attachment 3

- **Baseline Monitoring** – NSF conducts a comprehensive array of post-award administration activities involving both manual and automated procedures. Examples include the processing of cash requests and period of performance extensions. Baseline monitoring, executed in the course of post-award administration, seeks to verify that awardee institutions implement awards in compliance with federal regulations and the terms and conditions of NSF award agreements. Examples include review and approval of post-award requests/actions from awardees, review and approval of annual/final project reports, investigating excess cash on hand, and evaluating financial adjustments to closed awards. Baseline monitoring, conducted on all grants and agreements, results in the identification of exceptions and potential issues that require immediate attention or that may require further scrutiny through advanced monitoring.

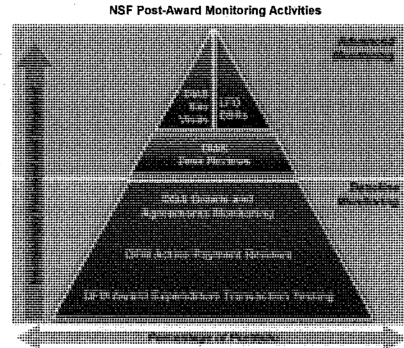
  In April, 2013, NSF implemented the Award Cash Management Service (ACM$), . transitioning the financial processing of award payments from the institutional cash pooling method to an award-level detail method.

  Awardee institutions are required to submit payment requests at the award level, enabling NSF financial and program staff to enhance baseline monitoring by having access to up to date expenditure and award balance information.

- **Advanced Monitoring** – NSF's advanced monitoring activities focus on developing a reasonable assurance that institutions managing the higher-risk awards possess adequate policies, processes, and systems to properly manage federal awards. Advanced monitoring activities include desk reviews, site visits, and Business Systems Reviews (BSR) of NSF's large facilities construction and operation.

This combination of post-award monitoring activities supplements other NSF award administration activities. For example, BFA reviews the financial management capabilities of new, potential awardees prior to issuing an award, and resolves a variety of issues related to awardees' management practices identified in federally mandated single audits of institutions managing NSF funds. In addition, program offices review programmatic aspects of an award throughout its lifecycle. DIAS/CAAR also reviews the indirect cost rate proposals for negotiation of Indirect Cost Rate Agreements (NICRA) for awardees for which it is cognizant. For specific awards, NSF reviews technical and cost proposals prior to making the award, as well as technical and financial reports and other deliverables after issuance of the award. This combination of activities provides internal checks throughout the grant's lifecycle, facilitating both the administration and monitoring of awards and of institutions receiving those awards.

NSF Post-Award Monitoring Activities



**Attachment 3**

## 4 Annual Risk Assessment Model

NSF utilizes a risk-based portfolio management approach that enables BFA management to focus limited monitoring resources on awardees administering higher risk awards. The risk assessment model uses a holistic approach to incorporate a wide range of award administration factors as follows:

- **Award Factors** – Fundamentally, risk is associated with the implementation and administration of individual awards. Some awards, because of their funding size or complexity, are inherently riskier than other awards. NSF also assigned risk points for awards funded by the American Recovery and Reinvestment Act of 2009 (ARRA) to ensure that the risks associated with the unique accountability and transparency requirements of ARRA are appropriately factored into the risk assessment. Until the last of the ARRA-funded awards are closed, NSF will continue to assign ARRA-funded awardees risk points to ensure they get continuous focus.

- **Institutional Factors** – These risk factors apply to the institution as a whole and, consequently, to all of the awards administered by the institution. These risk factors generally relate to the type of recipient organization and its experience in administering NSF awards.

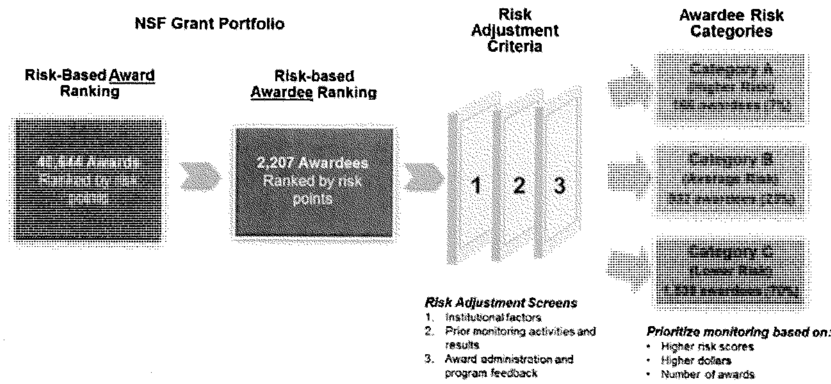
- **Prior Monitoring Activities and Results** – Many NSF post-award monitoring activities have multi-year impacts that consequently lower the comparative risk of the organizations that have participated in these monitoring activities. BFA has incorporated a time-weighted score into its risk model to reflect an organization's participation in prior post-award monitoring activities. On the other hand, post-award monitoring activities occasionally identify award administration or compliance issues that elevate the institution's comparative risk. NSF has assigned risk scores to organizations to capture any outstanding issues identified through NSF's advanced monitoring processes.

- **Award Administration and Program Staff Feedback** – BFA staff have access to a wide range of information gathered by other NSF divisions that relate to recipient organizations' performance and compliance in administering NSF-issued awards. This feedback can be subjective, such as recommendations for review by DFM, OIG, DGA, DACS, or Program Offices, or objective, such as the number of financial adjustments to closed awards that recipients have requested. BFA has incorporated into its risk assessment model a wide range of measures to capture this input.

The various risk scores are compiled into risk rankings for each individual award as well as for awardee organizations through the process illustrated in the figure below:

## Attachment 3

**BFA FY15 Award Portfolio Risk Assessment Process Results**




Awardee organizations are segregated into three categories that reflect the comparative level of risk. These categories help NSF to determine its monitoring priority for each awardee.

**Category A** – Institutions that manage high-risk awards and more than $500,000 of NSF funding, giving them a comparatively high risk ranking (approximately 7 percent of awardees). The FY 2015 risk score threshold for this category is 31 points or more.

**Category B** – Institutions that have either a moderate risk ranking (approximately 23 percent of awardees) and administer more than $500,000 of NSF funding or institutions for which NSF is the cognizant agency. The FY 2015 risk score threshold for this category is between 17 and 31 points.

**Category C** – The remaining approximate 70 percent of awardees for which NSF is not the cognizant agency and institutions that have a low risk ranking, administer less than $500,000 of NSF funding, or administer only Small Business Innovative Research (SBIR) awards. The FY 2014 risk score threshold for this category is less than 17 points.

By targeting advanced monitoring activities on category A and B institutions, NSF focuses its efforts and post-award resources on the 30 percent of NSF recipient organizations that administer 86 percent of the total award portfolio dollars. After determining which institutions should receive a current year site visit, DIAS ranks the remaining Category A and B institutions by their risk scores; those with the highest risk scores are typically scheduled for desk reviews on a resource-available basis.

**Attachment 3**

**FY 2015 Risk Assessment Award Portfolio Analysis***

| Category | Awardees | % | Obligations | % | Awards | % |
|---|---|---|---|---|---|---|
| A | 166 | 7% | $10,793,880,673 | 39% | 12,192 | 30% |
| B | 502 | 23% | $12,920,525,045 | 47% | 20,190 | 50% |
| C | 1,539 | 70% | $3,756,966,617 | 14% | 8,262 | 20% |
| **Total:** | 2,207 | | $27,471,372,335 | | 40,644 | |

* Award portfolio as of June 30, 2014
***Note:*** This table is updated annually to reflect portfolio composition.

Although the Risk Assessment outputs are the primary tool for selecting recipients for advanced monitoring site visits and desk reviews, DIAS has access to additional information that cannot be objectively captured through the risk assessment.

DIAS shares the results of the annual risk assessment process with LFO, upon request, for its consideration when selecting which institutions will undergo BSRs. The assessment outputs are also shared with DFM to aid its financial monitoring activities. The outputs are shared with the OIG upon request.

The Institutional Risk Assessment Guide for Post-Award Monitoring Activities describes detailed procedures related to this activity.

## 5 Baseline Monitoring

Baseline monitoring activities, which are conducted upon most awards, focus on post-award actions and financial transactions. DGA, DACS, and DFM have primary responsibility for baseline monitoring activities. Baseline monitoring, executed in the course of post-award administration, results in the identification of exceptions and potential issues that may require immediate investigation and resolution or that may require further scrutiny through advanced monitoring.

**Baseline Monitoring Characteristics**

- *Standard/Routine*
- *Highly automated*
- *Recurring*
- *Applied to most awards*

### 5.1 DGA Monitoring Activities

DGA has the primary responsibility for award monitoring and oversight of NSF grants and agreements with the exception of the large facilities awards overseen by DACS and the LFO. DGA's baseline monitoring activities can reveal a misunderstanding of, or non-compliance with, federal regulations and the terms and conditions of NSF awards.

DGA's monitoring and oversight activities include a proactive approach to internal and external outreach by providing dedicated support customized to meet the award and administration needs of the

**Attachment 3**

Directorates. DGA specifically reaches out to the Directorates with tailored "inreach" sessions, periodic attendance at program staff meetings, participation in reverse site visits, and awardee meetings at NSF.

DGA's outreach to the external community includes participation at awardee workshops/conferences, advanced monitoring site visits, program site visits as requested, and other teleconferences as needed. Outreach to the scientific community requires, and has resulted in, a close working relationship with both NSF staff and awardees. These relationships help to ensure that stewardship and management of public funds is accomplished in a manner that is consistent with award terms and conditions, NSF regulations, and other federal guidelines.

DGA also supports baseline monitoring through review of the following post-award requests that require prior approval from NSF:

- **Change of Principal Investigator/Project Director (PI/PD)** – Occurs upon awardee request to continue a project with a substitute PI/PD.
- **Award Transfers** – In those cases where a particular PI/PD's participation is integral to a given project and both the PI/PD's original and new organizations agree, NSF may approve a transfer of the award and the assignment of remaining unobligated funds to the PI/PD's new organization.
- **Supplements** – In certain circumstances, awardees may request supplemental funding to assure adequate completion of the project's original scope of work.
- **No Cost Extensions** – If additional time is needed to ensure adequate completion of the funded project activities, awardees are typically allowed to extend the expiration date of a grant once without prior approval, for up to 12 months. Extensions of additional time may be approved by the NSF Program Officer or through amendment of the award by DGA.
- **Transferring the Project Effort (Subawards)** – After a grant has been made, it may become necessary for the grantee to transfer part of the research. Addition of subawards may be approved through amendment of the award by DGA.
- **Changes in Objective or Scope** – Changes to the phenomena under study or the objectives of the project stated in the proposal should be proposed to the NSF Program Officer. If approved, the Grants and Agreements Officer will amend the award.
- **Expenditure Thresholds** – A limitation may be placed on the amount of funding that the grantee can access based on identified risk measures or as a result of an advanced monitoring activity.
- **Expenditure Thresholds (formerly Special Payments)** – Awardees that demonstrate the ability to meet the standards of financial management referenced in Chapter III of the NSF Award and Administration Guide (AAG) may request payments electronically through the FastLane Cash Request Function and are authorized to draw down advance payments as needed to cover immediate cash requirements. However, if NSF determines that an awardee is unable to meet these requirements, in whole or in part, the awardee will only be authorized to request payment

on a reimbursable basis through submission of an SF 270. (See SOG 2010-1, Special Payment Awardees on Reimbursement Only Basis).

DGA's ongoing management, oversight, and monitoring of awards may result in the identification of issues related to an awardee's administration of NSF-issued awards. Concerns can be referred to DIAS for inclusion in the annual risk assessment.

The Proposal and Award Manual (PAM) is a compendium of NSF internal policies and procedures related to the proposal and award administration process.

## 5.2 DFM Monitoring Activities

DFM is primarily responsible for baseline monitoring of financial transactions initiated by awardee institutions. DFM's baseline monitoring efforts can reveal potential financial anomalies, inaccurate expenditure reporting, or evidence of a possible misunderstanding of, or non-compliance with, federal cash management requirements and/or NSF guidelines. All NSF awardees must submit award-level payment requests using the Award Cash Management Service or ACM$ (ACM$) in Research.gov. ACM$ enables NSF to record expenses based on the amount of funds requested and eliminates the need for quarterly expenditure reporting.

The monitoring activities conducted by DFM include:

**Active Payment Reviews** – All institutions are subject to active payment reviews. These reviews are accomplished through the application of ACM$ based business rules and assessments of payment activity at the institution and award level by DFM accountants.

ACM$ business rules include:

- All ACM$ cash requests made after the award expected close date are held for review.
- All cash requests that liquidate the entire unliquidated balance for an awardee are flagged for follow up through a system notification.
- Payment thresholds can be set at institution and award levels to control access to funds or stop payments completely. The thresholds can be set by assigned personnel in DGA, DACS, and DFM.

ACM$ payment processing includes numerous other system based edits and validations that are applied for each transaction which do not require further review. Those automatic edits and validations are described in the DFM Realtime Monitoring SOG.

Payment activity assessment is comprised of:

- Analysis of payments at the awardee institution compared to historical and expected activity.
- Analysis of payments at the award level compared to the award period and request frequency.
- Identification and substantiation of inactive awardees.

## Attachment 3

All DFM active payment reviews are focused on daily, monthly, quarterly, and annual transactional activity. The reviews do not address allowability of award costs or compliance with programmatic requirements. Concerns in those areas will be referred to the appropriate NSF office.

**Program Income –** DFM reviews program income reported on the Program Income Reporting Worksheets submitted to NSF in order to verify that awardee institutions are properly reporting program income in accordance with NSF's policies. DFM validates reporting compliance by conducting follow-up activities for late reports, reviewing reports for completeness, tracking reported and expended program income, and addressing any awardee issues related to the holding of excess program income. Problems or concerns noted are referred to the appropriate NSF office.

**Award Expenditure Transaction Testing –** NSF determines the award expenditure transaction testing requirements and scope each year. In general, the purpose of award expenditure transactional testing is to systematically test a representative sample of payment/expenditure transactions; identify potential unallowable, unsupported or erroneous award expenditures; calculate an expenditure error rate for the sampled awards; and assess the likelihood that awardee errors would result in a material effect on NSF financial statement reporting. Selected awardee expenditures are analyzed for compliance with the applicable cost principles, NSF policies, and the award terms and conditions. DFM has an established protocol for determining the sample population and for addressing issues related to transaction testing; see Award Expenditure Transaction Testing Guidance.

Review topics and questions include, but are not limited to, the following:

- Did the awardee provide adequate documentation to support the validity of the expenditure?
- Was the cost incurred during the period of performance?
- Does the cost represent an expressly unallowable cost as cited in the cost principles, NSF policies, or the award terms and conditions?
- Is there any indication from the supporting documentation that the selected transaction has been previously paid?
- Was the service or product actually provided?
- Does the payment agree with the terms of the sub-award agreement (if applicable)?

Concerns noted as a result of these reviews are referred to the appropriate NSF office.

**Financial Close Out of Unliquidated Grant Balances –** DFM monitors awards with unliquidated balances which are due to expire to ensure that they are closed in accordance with standard operating procedures. The awardee must submit the final project report and final cash draws through ACM$ no later than 90 days after the award expiration date. All awards with expiration dates 90 days or more in the past are financially closed by the monthly award close batch job.

Each month DFM reviews awards with unliquidated balances greater than 75% of the obligated amount that will expire in the next three months. DFM sends notices to the awardee financial contacts advising them that the awards are approaching their expiration date and have large unliquidated balances.

**Adjustments to Closed Awards** – ACM$ generates a warning message for all payment requests which include an adjustment of $25,000[2] or more to a closed award. Each request is reviewed by a DFM accountant and either approved or rejected.

Each quarter DFM provides a report of all adjustments to closed awards to DIAS, which then reviews upward adjustments over $25K that increase expenditures previously reported to verify compliance with the award's terms and conditions and that the costs are reasonable, allowable, and allocable. To complete its analysis of those higher value adjustment requests, DIAS also may request additional awardee documentation (if necessary).

The "DFM Post Activity Awardee Monitoring Processes" and "DFM Realtime Awardee Monitoring" describe detailed procedures related to these activities.

## 5.3 DACS Monitoring Activities

DACS, through its Cooperative Support Branch (CSB), is responsible for administration, award, and monitoring of large facility projects and the Federally Funded Research and Development Centers (FFRDCs). CSB is charged with conducting post-award monitoring as a routine part of award administration, ensuring timely receipt of deliverables, suggesting corrective actions including compliance with terms and conditions, and directing necessary action to ensure performance.

CSB staff is involved throughout the lifecycle of these projects in order to effectively administer and monitor the awards. CSB provides advice and assistance to program offices through planning and formal and informal communications with program staff, meeting as required with Division Directors to ascertain needs and requirements. The staff participates and actively supports strategic planning meetings for major facilities. This participation includes representation on the NSF Integrated Project Teams (IPTs) which coordinate NSF's tactical, administrative, and strategic oversight and assurance during both the design and construction stages for large facilities projects. As part of NSF's shared oversight and assurance philosophy, DACS works closely with the LFO and DIAS/CAAR as members of the IPT.

More specifically, the CSB staff provides guidance on:

- Readiness of business systems and financial capacity to accept substantial NSF funds
- Competition strategies for placing subawards and subcontracts
- Price/cost analyses of proposed budgets for future activities
- Crafting special administrative terms and conditions for cooperative agreements adapted to the particular circumstances of individual projects
- Planning for and participation in NSF-led external reviews of large facilities and prospective large facilities.

CSB staff plays critical roles in post-award assessments of large facility business systems to ensure that large facility awardee organizations are effective and efficient stewards of federal funds. Along with

[2] Adjusted upwards to $25,000 from $10,000 for all requests received after October 1, 2014.

other post-award oversight, assurance and monitoring activities conducted by CSB, staff participates in all facets of the BSR process, including planning, participating, and resolving areas requiring corrective action and resolution.

A critical performance requirement of positions within this office is to improve award administration by proactively engaging in post-award monitoring and oversight activities and to improve service from NSF by increasing value-added business process leadership. Because the mission of CSB is to provide dedicated support tailored to meet the award and administration needs of the cooperative agreements within its portfolio, the preponderance of monitoring performed by CSB is conducted through these post-award monitoring and oversight activities. Information related to these activities is communicated and maintained through file documentation, email, and periodic status reports and reviews. Links to the "Proposal and Award Manual" (PAM); the BSR Guide, which describes detailed procedures for the BSRs; and the "Large Facilities Manual," which provides additional detail on the Conceptual, Preliminary, and Final Design Review are all available in the appendix.

# 6 Advanced Monitoring

The goal of NSF's advanced monitoring activities is to ensure that awardee institutions possess adequate policies, processes, and systems to manage NSF awards. Advanced monitoring activities involve collecting and analyzing information on the business systems and award administration practices of awardee institutions. Through these review activities, NSF assesses its awardees' capacity to administer NSF-issued awards in compliance with federal regulations and NSF policies and procedures, as well as evaluates awardee performance in specific high-risk award administration areas. Since many institutions receive more than one award, advanced monitoring activities increases assurance that the awardees will effectively administer all NSF-issued awards. Advanced monitoring activities include desk reviews and site visits, led by DIAS with DGA participation, as well as Business System Reviews (BSRs), led by LFO.

**Advanced Monitoring Characteristics**

- *Targeted/Focused*
- *May be customized*
- *Based on risk*
- *Applied to select awards*

## 6.1 LFO Advanced Monitoring Activities: Business Systems Reviews (BSRs)

BSRs are one of NSF's advanced monitoring activities designed to provide oversight and assurance of the suite of business systems (people, processes, and technologies) that support the administrative management specifically for NSF large facilities. The Large Facilities Office (LFO) has the lead role in coordinating the assessment of these systems by using desk reviews and site visits to assess the facilities' capacity to comply with NSF policies and procedures and federal regulations.

The large facilities subject to a BSR are the major multi-user facilities and the facility construction projects listed in the Major Research Equipment and Facilities Construction (MREFC) and Facilities sections of the NSF's annual Budget Request to Congress. Inherent risks are associated with funding large facility awards because of the high dollar value, scientific complexity of the award activity, and

long-term commitment of support. NSF has recognized the need to provide additional scrutiny of the business systems that affect the stewardship of federal funds and developed this BSR process.

NSF has identified eight core business systems that support a large facility:

- General Management
- Award Management
- Budget and Planning
- Financial Management
- Financial Reporting
- Human Resources
- Procurement
- Property and Equipment.

However, each facility presents a distinct variety of challenges and concerns. Each BSR takes these differences into consideration. The BSR provides the flexibility to tailor each review to address the unique aspects of the business arrangements. BSRs rely on the professional judgment of the assigned team to define the scope of the review and to examine the complexities of the administrative business systems employed to manage the facility.

Following the BSR, NSF develops a report that documents the overall observations and recommendations. The report may also identify issues of compliance requiring corrective action and resolution.

The Business Systems Review Guide describes detailed procedures related to this activity.

## 6.2 DIAS Advanced Monitoring Activities: Desk Reviews

Through desk reviews overseen by DIAS, BFA collects and analyzes information to assess recipients' capacity to manage federal awards. Standard desk reviews include a review of an institution's policies and general management practices and an assessment of the adequacy of its accounting and financial systems. The product of the desk reviews is a summary report supported by an Award Brief and Work Papers (i.e., supporting documentation) and includes the following components:

- Executive Summary of areas of concern
- Computation of the cumulative budget for the selected award
- Survey of the awardee's organization and general management systems
- Survey of the awardee's accounting systems

Enhanced ARRA desk reviews augment a standard desk review through completion of an ARRA review module, which verifies that the awardee has developed policies, procedures, and appropriate changes to underlying financial and grant management systems to separately account for ARRA funding. Supplemental ARRA desk reviews are completed for selected awardees for which advanced monitoring has been previously completed. Supplemental ARRA reviews include a review of the progress made to

**Attachment 3**

address previously identified award administration issues and the completion of the ARRA review module.

NSF informs the awardees of any issues identified during the desk review and requires, for any significant/serious concerns, that the awardee develop an action plan to comply with federal regulations and NSF policies and procedures. NSF tracks these significant/serious concerns to monitor awardee progress in correcting the identified areas of concern or to schedule a site visit if necessary. Upon satisfactory resolution of the concerns, supporting documentation related to the concerns is filed and the concern is closed.

The Advanced Monitoring Desk Review Guide describes detailed procedures related to this activity.

## 6.3 DIAS Advanced Monitoring Activities: Site Visits

Site visit reviews conducted by teams comprised of DIAS, DGA, or DACS staff, assess awardees' capability, performance, and compliance against the applicable elements that make up each award. This may include administrative regulations and public policy requirements, as well as special and general terms and conditions, including those contained in the NSF program announcement/solicitation, grant or cooperative agreement, and the award letter. Site visit reviews can include core and targeted review components or a combination of the following:

- **Core Review Modules**
  - General Management Survey
  - Accounting System Survey
  - Desk Review Follow-Up (*if appropriate*)
  - ARRA Review (*if appropriate*)
- **Targeted Review Modules**
  - Consultants
  - Cost Sharing
  - Final Project Reports
  - Fringe Benefits
  - Indirect Costs
  - Participant Support Costs
  - Procurement
  - Program or Award-Related Income
  - Property and Equipment
  - Special Terms and Conditions
  - Subawards and Subrecipient Monitoring
  - Personnel Compensation Records
  - Travel

Following each site visit, NSF issues a report delineating concerns identified during the review and outlining specific issues that the awardee must address to comply with federal regulations and NSF

**Attachment 3**

policies and procedures. Site visit reports and letters are generally issued within 90 days of the completion of the site visit. If the post-site visit letter denotes any issues requiring follow-up with the awardee, NSF monitors receipt of awardee responses to the letter that are required within 30 days of issuance. NSF tracks the status of each awardee's implementation of a mutually agreed-upon remedy.

NSF began conducting virtual site visits in FY 2012. These reviews combine virtual communication tools with the proven site visit methodology to cost effectively conduct an in-depth review of the awardee's grant-related policies, procedures, and practices.

The Advanced Monitoring Site Visit Review Guide describes detailed procedures related to this activity.

## Closing Statement

This SOG document provides an overview of the NSF's approach to monitoring its grant and cooperative agreement award portfolio. It describes BFA's award monitoring approach and outlines the stewardship activities undertaken to ensure that awardee institutions administer federal funds in compliance with federal regulations and NSF policies and procedures. This document is intended to provide guidance to BFA staff and contains a consolidated reference of existing documents for the financial and administrative procedures and activities for post-award monitoring within BFA. SOGs and other documents providing practical guidance for administering the activities described throughout this SOG can be referenced through the links included in the Appendix.

## Appendix

NSF has developed detailed procedures for the post-award monitoring activities outlined in this SOG. Below is a consolidated reference for the financial and administrative procedures and activities within BFA.

- Institutional Risk Assessment Guide for Post-Award Monitoring Activities
- Proposal and Award Policies and Procedures Guide (PAPPG)
- Proposal and Award Manual (PAM)
- Large Facilities Manual
- Advanced Monitoring Desk Review Guide
- Advanced Monitoring Site Visit Review Guide
- Business Systems Review Guide Version 3.2
- SOG 2010-1, Special Payment Awardees on Reimbursement Only Basis
- Award Transaction Testing Standing Operating Guidance – contact DFM
- DFM Post Activity Awardee Monitoring Processes – contact DFM
- DFM Realtime Awardee Monitoring – contact DFM

**Attachment 4**

THE
HEINZ
CENTER

September 19, 2008

Mr. Thomas Sheldon,
Chief Financial Officer
National Ecological Observatory Network
3223 Arapahoe Avenue
Suite 210
Boulder, CO 80303

Dear Tom,
Thank you for working through the issue of the build out costs for the Suite at the Heinz Center. As I noted in our most recent conversation we were able to find a tenant so we did not lose any rent opportunity.

As previously discussed the Heinz Center incurred costs due to NEON's change of plans with regard to the sublease including the leasing agent fee. We also incurred additional costs to re-design the space from the original NEON plan in order to make it rentable. It is Tom Lovejoy's understanding that the NEON board does not wish the Heinz Center to incur any loss.

I am attaching an invoice and the bills that reflect the total of $100,000 which is the difference between the build out allowance and the actual costs. Please let me or Doug Black know if you have any questions regarding this information.

Thank you for working through this with me. Let me know how you would like to proceed with the payment.

All the best,

*Anne E. Hummer*
Anne E. Hummer
Vice President for Operations & External Affairs

cc: Douglas Black, Director Finance & Administration

THE H. JOHN HEINZ III CENTER FOR SCIENCE, ECONOMICS AND THE ENVIRONMENT
900 17th Street, N.W., Suite 700, Washington, D.C. 20006
Telephone (202) 737-6307 Fax (202) 737-6410 www.heinzctr.org

**Attachment 4**

## REQUEST FOR REIMBURSEMENT

**Construction of Suite 710**
**900 17th Street, NW**

**Request date** 9/19/2008
**Request #**

**FROM:**

The Heinz Center
Attn: Douglas Black
900 17th Street St. NW
Suite 700
Washington, DC 20006

**TO:**

National Ecological Observatory Network
Attn: Tom Sheldon, CFO
1444 Eye Street, NW
Suite 200
Washington, DC 20005

| Vendor | Services Rendered | Date of Invoice | Invoice Number | | Amount of Invoice | Paid by The Heinz Center | To Be Paid by The Heinz Center | Percent Complete |
|---|---|---|---|---|---|---|---|---|
| HBW Group | Construction of suite | 6/25/2008 | 01 | $ | 120,749.99 | 8/13/2008 | | 100% |
| HBW Group | Construction of suite | 7/17/2008 | 02 | $ | 92,648.66 | 8/13/2008 | | 100% |
| OTJ Architects | Architectural Design Services | 12/31/2007 | 712048 | $ | 3,983.50 | 3/20/2008 | | 100% |
| OTJ Architects | Architectural Design Services | 9/12/2008 | 88116 | $ | 2,725.61 | 9/12/2008 | | 100% |
| Staubach | Real Estate Services | 8/1/2008 | 11727-23014-77606 | $ | 48,685.59 | 9/12/2008 | | 100% |
| **Total Construction Expense** | | | | $ | **268,793.35** | All paid by the Heinz Center | | |
| **Final reimbursement to The Heinz Center per agreement** | | | | **$** | **100,000.00** | | | |

Certification: I certify that the vendors requesting reimbursement have provided the services reported in a professional manner.

________________________________________

Douglas Black, Director of Finance and Administration
The H. John Heinz III Center for Science, Economics and the Environment

**Attachment 4**

RECEIVED
AUG 28 2008

STAUBACH

August 1, 2008

Anne Hummer
The H. John Heinz III Center for Science, Economics and the Environment
900 17th St NW Ste 700
Washington, DC

**INVOICE # 11727-23014-77606**

**Tenant:** Heinz Center, The
**Landlord:** CP/IPERS Farragut, LLC, c/o ING Clarion Real Estate Services
**Address of Space:** 900 17th St NW Ste 700
Washington, DC 20006
**Rentable Size:** 3,090 SQFT

**COMMISSION CALCULATION**

| Square Feet | Number of Months | Rate Per Unit | Aggregate Rent | Commission Rate | Commission Amount |
|---|---|---|---|---|---|
| 3,090 | 12 | $54.50 | $168,405.00 | 5.50% | $9,262.28 |
| 3,090 | 12 | $55.86 | $172,607.40 | 5.50% | $9,493.41 |
| 3,090 | 12 | $57.26 | $176,933.40 | 5.50% | $9,731.34 |
| 3,090 | 12 | $58.69 | $181,352.10 | 5.50% | $9,974.37 |
| 3,090 | 12 | $60.16 | $185,894.40 | 5.50% | $10,224.19 |

TOTAL COMMISSION DUE: $48,685.59

**Commission Due On Receipt:** **$48,685.59**

DUE UPON RECEIPT OF INVOICE

**Please Remit Payments To:**
The Staubach Company-Northeast
Attn: Accounts Receivable
8484 Westpark Drive - Suite 150
McLean, VA 22102

**Federal Taxpayer ID 75-2113348**

**CFO:** Douglas [illegible]
**S. ACCTT:**
**A/C DESCR:** Rent Expense - Commission
**A/C #:** 1-6525-9000-9040-0001-1

**VENDOR ID:**
**PERIOD POSTED TO:** Sep 09
**DATE:** 9/12/09

**Attachment 4**

# INVOICE

**COPY**

HBW GROUP
1055 First Street, Suite 200
Rockville, MD 20850
301-424-2900; FAX: 301-517-8555

SOLD TO:

The H. John Heinz III Center for
Science, Economics & Environment
900 17th St, NW - Suite 700
Washington, DC 20006
Attn: Anne Hummer

INVOICE NUMBER: 10040.02
PERIOD TO: 7/31/2008
OUR JOB NUMBER: 10040
INVOICE DATE: 7/17/2008
TERMS: Net 30 days

| ITEM NUMBER | DESCRIPTION | | AMOUNT |
|---|---|---|---|
| 1 | Project: | Heinz Center Expansion<br>900 17th St, NW, Suite 710<br>Washington, DC 20006 | |
| | | Application # 2 | 92,648.66 |
| | | SUBTOTAL: | 92,648.66 |

**MAKE ALL CHECKS PAYABLE TO:**

HBW Group
1055 First Street, Suite 200
Rockville, MD 20850

***PAY THIS AMOUNT:*** **$92,648.66**

*Questions concerning this invoice?*
Call: **Sue Apple - (301) 424-2900**
Email: sapple@hbwgroup.com

***THANK YOU FOR YOUR BUSINESS!***

*Original Copy*

**Attachment 4**

# INVOICE

HBW GROUP
1055 First Street, Suite 200
Rockville, MD 20850
301-424-2900; FAX: 301-517-8555

SOLD TO:

The H. John Heinz III Center for
Science, Economics & Environment
900 17th St, NW - Suite 700
Washington, DC 20006

INVOICE NUMBER: 10040.01
INVOICE DATE: 6/30/2008
OUR JOB NUMBER: 10040
INVOICE DATE: 6/25/2008
TERMS: Net 30 days

| ITEM NUMBER | DESCRIPTION | | AMOUNT |
|---|---|---|---|
| 1 | Project: | Heinz Center Expansion<br>900 17th St, NW, Suite 710<br>Washington, DC 20006 | |
| | | Application # 1 | 120,749.99 |
| | | SUBTOTAL: | 120,749.99 |

**MAKE ALL CHECKS PAYABLE TO:**

HBW Group
1055 First Street, Suite 200
Rockville, MD 20850

***PAY THIS AMOUNT:*** **$120,749.99**

*Questions concerning this invoice?*
Call: **Sue Apple - (301) 424-2900**
Email: sapple@hbwgroup.com

***THANK YOU FOR YOUR BUSINESS!***

*Original Copy*

Attachment 4

# Invoice

| DATE | INVOICE NO. |
|---|---|
| 8/31/2008 | 88116 |

O T J ARCHITECTS

1412 Eye Street, NW Zei Alley Entrance
Washington, DC 20005
Tel 202.238.4094 Fax 202.234.2900 Web otj.com

The Heinz Center
Attn.: Ms. Anne Hummer
900 17th Street, NW
Suite 700
Washington, DC 20006

| TERMS | P M | PROJECT |
|---|---|---|
| NET 15 | RSS | 4317.02 |

| DESCRIPTION | AMOUNT |
|---|---|
| Architectural Design Services Performed Through August 31, 2008 | |
| For: The Heinz Center sublet | |
| Consolidated Engineering - CAD Operator : 13 hours | 780.00 |
| Consolidated Engineering - Senior Engineer : 10 hours | 1,100.00 |
| Sub-total Services : | 1,880.00 |
| Reimbursable Expenses | |
| Blueprinting & CAD Plotting | 72.25 |
| Courier | 24.36 |
| Local Transportation | 74.00 |
| Permit - DC Treasurer | 100.00 |
| Permit Expediter | 575.00 |
| Sub-total Reimbursable Expenses: | 845.61 |

CFO: Douglas Blad
S. ACCTT:
A/C DESCR: Architectural SVC
A/C #: 1-1503
VENDOR ID: OTJ
PERIOD POSTED TO: Sep 08
DATE: 9/11/08

| PLEASE NOTE OUR NEW ADDRESS | **Total** | $2,725.61 |
|---|---|---|

Change to 1503
DB 9/11/08

**Attachment 4**

# Invoice

| DATE | INVOICE NO. |
|---|---|
| 12/31/2007 | 712048 |

OTJ ARCHITECTS
1232 31st Street NW Washington, DC 20007
Tel 202.238.4094 Fax 202.234.2900 Web otj.com

The Heinz Center
Attn.: Ms. Sharon Phenneger
900 17th Street, NW
Suite 700
Washington, DC 20006

| TERMS | P M | PROJECT |
|---|---|---|
| NET 15 | RSS | 4317.02 |

| DESCRIPTION | AMOUNT |
|---|---|
| Architectural Design Services Performed Through December 31, 2007 | |
| For: The Heinz Center - sublet | |
| Full Service | |
| Lump Sum Fee: $ 11,350.00 | |
| 85 % Complete: $ 9,647.50 | |
| Less Previous Billing: $ 5,675.00 | |
| Amount Due This Billing : | 3,972.50 |
| Sub-total Services : | 3,972.50 |
| Reimbursable Expenses | |
| Local Transportation | 10.00 |
| Sub-total Reimbursable Expenses: | 10.00 |
| Plus Handling Charge | 1.00 |

**CFO:** Anne E. Humme
**S. ACCTT:** ~~[illegible]~~
**A/C DESCR:** Construction in Progress.
**A/C #:** 1-1503
**VENDOR ID:** OTJ
**PERIOD POSTED TO:** January 2008
**DATE:** 3/19/08

| Payment is due within 15 days upon receipt of invoice | **Total** | $3,983.50 |
|---|---|---|

**Attachment 5**

**OFFICE LEASE AGREEMENT**

**THIS LEASE AGREEMENT** is made as of the 21st day of November, 2008 by THE H. JOHN HEINZ III CENTER FOR SCIENCE, ECONOMICS AND THE ENVIRONMENT, a Pennsylvania not-for-profit corporation ("Landlord"), and NEON, Inc., a District of Columbia not-for-profit corporation ("Tenant"), who agree as follows:

1. **BASIC LEASE TERMS**

The following terms shall have the following meanings in this lease.

| | | |
|---|---|---|
| a. | **Premises:** | Approximately 670 rentable square feet (2 offices) in suite 700 of 900 17th Street, NW that includes a prorated share of common space. |
| b. | **Rent commencement date:** | December 1, 2008 |
| c. | **Term:** November 30, 2009. | **12** months from December 1, 2008 - |
| d. | **Base rent:** | $50,000 payable in advance, which includes reception services, furniture rental, IT support and use of common areas: workroom, kitchen, conference room, library., . NEON will not be liable for additional utility or CAM costs. |
| e. | **Address for notices:** | |
| | **To Landlord:** | The H. John Heinz III Center for Science, Economics and the Environment<br>900 17th Street, NW Suite 700<br>Washington, DC 20006<br>Attn: Thomas W Nichols |
| | **To Tenant:** | NEON, Inc.<br>5340 Airport Blvd.<br>Boulder, CO 80301<br>Attn: Tom Sheldon |

**Attachment 5**

## 2. PAYMENT OF RENT

Rent shall be paid in full by December 31, 2008 in lawful money of the United States of America. Any rent owed by Tenant which is not paid within 5 business days after the rent is due shall bear interest from the due date until paid at a rate equal to the prime rate on corporate loans quoted in the *Wall Street Journal* plus three percent (3%).

## 3. USE

Tenant covenants with the Landlord not to use the Premises for any purpose other than general office use for the conduct of the Tenant's business (which includes general office work, meetings and conferences). Tenant shall not use the Premises or allow the Premises to be used for any other purpose without the prior written consent of the Landlord. Tenant, at Tenant's expense, shall comply with all laws, codes, rules, orders, ordinances, directions, regulation, and requirements of federal, state, county, and municipal authorities, now in force or which may hereafter be in force, which shall impose any duty upon Landlord or Tenant with respect to the condition, maintenance, use, occupation, operation or alteration of the Premises, or the conduct of Tenant's business therein, including, without limitation, the Americans with Disabilities Act, of 1990 and all regulations promulgated thereunder (collectively, the "ADA"), as amended and all applicable zoning, recycling and environmental laws and regulations. Tenant hereby agrees to indemnify and hold harmless Landlord and its agents, officers, directors and employees from and against any cost, damage, claim, liability and expense (including reasonable attorneys' fees) arising out of claims or suits brought by third parties against Landlord, its agents, officers, directors and employees alleging or relating to the failure of the Premises to comply with the terms of the ADA, as amended, or any other law or regulation applicable to the Premises and/or its occupancy by Tenant (if and to the extent such failure to comply is the result of Tenant's failure to perform its obligations with respect thereto hereunder). Tenant shall not use or permit the Premises or any part thereof to be used in any manner that constitutes waste, nuisance or unreasonable disturbances to other tenants of the Building or for any disorderly, unlawful or hazardous purpose and will not store or maintain therein any hazardous, toxic or highly combustible items other than usual and customary office supplies intended for Tenant's use and in such event, only in such amounts as permitted by applicable law. Tenant covenants not to change Tenant's use of the Premises without the prior written approval of Landlord.

Tenant shall not put the Premises to any use, the effect of which use is reasonably likely to cause cancellation of any insurance covering the Premises or the Building, or an increase in the premium rates for such insurance. In the event that Tenant performs or commits any act, the effect of which is to raise the premium rates for such

insurance, Tenant shall pay Landlord the amount of the additional premium, as Additional Rent payable by Tenant upon demand therefore by Landlord. The Premises shall not be used for any illegal purpose or in violation of any regulation of any governmental body or the regulations or directives of Landlord's insurance carriers, or in any manner which interferes with the quiet enjoyment of any other tenant of the Building. Tenant will not install or operate in the Premises any electrical or other equipment, other than such equipment as is commonly used in modern offices (specifically excluding mainframe computers), without first obtaining the prior written consent of Landlord, who may condition such consent upon the payment by Tenant of Additional Rent in compensation for excess consumption of water, electricity and/or other utilities, excess wiring and other similar requirements, and any changes, replacements or additions to any base building system, as may be occasioned by the operation of said equipment or machinery.

Tenant agrees to maintain the Premises, and the Tenant Improvements and other Alterations (hereinafter defined) therein, in good order, repair and condition during the Term at Tenant's sole cost and expense, and Tenant will, at the expiration or other termination of the Term, surrender and deliver the same and all keys, locks and other fixtures connected therewith (excepting only Tenant's personal property) in good order, repair and condition, as the same shall be at the Commencement Date, except for ordinary wear and tear, casualty and condemnation. Except as specifically provided herein, Landlord shall have no obligation to Tenant to make any repairs in or to the Premises, the Tenant Improvements or any Alterations. Except as otherwise provided in Section 13, below, any and all damage or injury to the Premises (including, but not limited to, the Tenant Improvements), the Building or the Land caused by Tenant, or by any employee, agent, contractor, assignee, subtenant, invitee or customer of Tenant shall be promptly reported to Landlord and repaired by Tenant at Tenant's sole cost; provided, however, that Landlord shall have the option of repairing any such damage, in which case Tenant shall reimburse Landlord for all reasonable costs incurred by Landlord in respect thereof as Additional Rent within fifteen (15) days after Tenant receives Landlord's written notice of such costs.

### 4. ASSIGNMENT AND SUBLETTING

Tenant shall not (i) assign or otherwise transfer this Lease or any of Tenant's right hereunder, (ii) sublet the Premises or any part thereof, or permit the use of the Premises or any part thereof by any persons other than Tenant or its employees, agent or invitees, or (iii) permit the assignment or other transfer of this Lease or any of Tenant's rights hereunder by operation of law.

### 5. IMPROVEMENTS

Tenant shall neither make nor allow any alterations, decorations, replacements, changes, additions or improvements (collectively referred to as "Alterations") to the Premises or any part thereof that will or may affect the mechanical, electrical, plumbing, HVAC or other systems or the exterior or structure of the Building,

without the prior written consent of Landlord, which may be withheld by Landlord in its sole discretion. Tenant shall not make or allow any other kind of Alterations to the Premises or any part thereof without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Notwithstanding the foregoing, Tenant shall have the right, after providing at least ten (10) days' prior written notice to Landlord, but without the necessity of obtaining Landlord's consent, to make purely "cosmetic" or "decorative" nonstructural Alterations in and to the Premises if such Alterations (i) are not visible from the exterior of the Building or the common areas within the Building, (ii) are not structural, (iii) do not affect the mechanical, electrical, plumbing or life-safety systems within the Building, and (iv) are in conformance with all applicable laws affecting the Building.

**5. RIGHTS OF BUILDING LANDLORD**

Landlord reserves the right to enter the Premises at any reasonable time for inspection upon reasonable prior notice (which may be oral), or at any time, without prior notice, in the event of any emergency.

All conditions present in the Lease between the Landlord and the Building Landlord, CP/IPERS Farragut, LLC. apply to the Tenant.

**6. INSURANCE**

Tenant, at its sole cost and expense, shall procure and maintain in full force and effect at all times during the Term hereof the following insurance coverages:

(a) commercial insurance liability insurance (occurrence basis) in an amount of not less than One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) general aggregate, and naming Landlord as additional insured;

(b) workers' compensation insurance, in an amount not less than that required by law and employer's liability insurance, in the amount of not less than One Million Dollars ($1,000,000) each accident for bodily injury by accident and One Million Dollars ($1,000,000) bodily injury by disease;

All insurance policies carried by Tenant (a) shall be written as primary policy coverage and not contributing with or in excess of any coverage which Landlord may carry, (b) shall contain a waiver or subrogation in favor of Landlord, and (c) shall not contain a deductible or self-insured retention in excess of $100,000. In addition all insurance policies carried by Tenant shall be written by a company or companies licensed to do business in the jurisdiction in which the Building is located and rated not lower than "Class A-X", as rated in the most recent edition of the Alfred M. Best Company, Inc.'s Rating Guide for insurance companies and otherwise approved by Landlord. Insurance certificates evidencing the effectiveness of the insurance

coverage Tenant is required hereunder to maintain shall be delivered to Landlord upon lease commencement and then annually.

**7. DEFAULT AND REMEDIES**

An "Event of Default" shall be deemed to have been committed by Tenant upon the occurrence of any of the following events:

(a) the failure to pay monthly rent when due and failure continues beyond the period of 5 days past the due date;

(b) the failure to maintain the insurance coverage required per this agreement;

(c) the violation or failure to perform any of the other terms, conditions, or agreements herein made by Tenant and which violation or failure continues for thirty (30) calendar days after notice.

Upon an Event of Default as defined above, at Landlord's option, this Lease shall terminate, without prejudice however, to the right of Landlord to recover from Tenant all rent and any other sums accrued up to the later of the date of termination of this Lease or the date Landlord recovers possession of the Premises.
Tenant shall have ten (10) working days to cure a default after detailed notification of such default. In the event of an uncured default, both Tenant and Landlord agree to seek and accept resolution from an independent arbitrator. The foregoing is not intended to, and shall not, limit Landlord in the exercise of any other remedy for such immediate Event of Default.

**8. VOLUNTARY SURRENDER**

The voluntary or other surrender of this Lease by Tenant, or a mutual cancellation thereof, shall be required to be in writing and submitted within 30 days of the surrender date. Landlord shall have no obligation or liability to the Tenant thereunder for any claim, damage or injury which accrued prior to the date of surrender or mutual cancellation hereunder.

**9. OPTION TO EXTEND**

Tenant shall submit a request to extend the term of this lease to Landlord within 30 days of the expiration date of this lease. At that time, Landlord will reevaluate its need for the leased space. Landlord shall not unduly withhold the option to renew for a period of three to six months after examining its space needs in the near term.

**10. PARKING**

**Attachment 5**

Tenant shall be responsible for contracting directly with Building parking operator. No parking spaces shall accrue from the Landlord to the Tenant for the parking facility located in the Building.

**11. FITNESS FACILITY**

Tenant shall have full use of the Fitness Facility located in the Building. The Fitness Facility is unstaffed and Tenant's employees shall use the Fitness Facility at their own risk.

**12. CONVEYANCE OF USE REQUIREMENTS AND RESTRICTIONS**

All terms and requirements pertaining to the use of the Building in the Lease Agreement between CP/IPERS Farragut, LLC and The H. John Heinz III Center for Science, Economics and the Environment shall pertain to the Lease between The H. John Heinz III Center and NEON, Inc.

**13. MISCELLANEOUS**

This agreement shall be construed and enforced in accordance with the laws of the District of Columbia. This agreement may not be amended, modified or waived other than in writing signed by both parties. If any term or condition of this agreement is found to be invalid, the other provisions hereof shall nevertheless remain in full force and effect.

**IN WITNESS WHEREOF**, duly authorized representatives of Landlord and Tenant have executed this Office Lease Agreement under seal on the day and Year first above written.

**LANDLORD:**

The H. John Heinz III Center for Science, Economics and the Environment
A Pennsylvania corporation

________________________________________
Thomas W. Nichols, Vice President for Finance and Administration

**TENANT:**

NEON, Inc.

**Attachment 5**

A District of Columbia corporation

*Responses by Dr. James Collins*

Privileged & Confidential
Attorney-Client Privileged
Attorney Work Product

Written Responses to the House Committee on Science, Space, and Technology Subcommittees on Oversight and Research and Technology Questions for the Record

Dr. James P. Collins, Chairman of the Board, National Ecological Observatory Network, Inc.

March 9, 2015

Questions from Chairman Barry Loudermilk and Chairwoman Barbara Comstock:

1. **Did anyone at NSF specifically suggest that NEON use management fees to pay for unallowable expenses?**

NSF has consistently indicated to NEON that management fees constitute discretionary or unrestricted funds and can be used to pay for business costs that are considered unallowable. As I noted in my testimony at the February 3, 2015 hearing, NSF was aware of NEON's use of management fees for unallowable expenses.

2. **After NSF approved a management fee, did NEON conclude on its own that the fee could be used to pay for any unallowable cost whatsoever and without review by NSF?**

No. NSF engaged in periodic reviews of NEON's expenditures and was aware that NEON used the management fee to pay for unallowable costs.

3. **Did anyone at NSF tell NEON that the management fees were unauditable?**

Yes. As noted by Representative Johnson during the hearing, Timothy Kashmer of NSF sent an e-mail on January 8, 2009 to Tom Sheldon, at that time the CFO of NEON, noting that "There is no rule or requirements for drawing down management fees for assistance awards. These are unauditable fees."

4. **The NSF indicates in their proposed rule that it uses management fees as a "financial incentive" and to "obtain and retain high caliber staff."**

a. **Does NEON use management fees as a financial incentive and to obtain and retain high caliber staff?**

On rare occasions, NEON has used management fees as a financial incentive to obtain high caliber staff.

b. **Is the opportunity to lead the development and operation of a singular, publicly-funded research facility a substantial factor in recruiting and retaining professional staff?**

I cannot speak to the motivations of others, but the opportunity to be a part of NEON's cutting-edge work was the single most important factor in my joining the board of the organization.

c. **What is the range of salaries the top leadership at NEON receives?**

The salaries for NEON's leadership are included in NEON's annual IRS Form 990, are a matter of public record, and are available at various websites, including Guidestar.org.

**5. Was NEON's first request for a management fee to the NSF the exact amount of the unallowable expenses that it incurred?**

No. The first request for management fees was an estimated amount that equaled approximately .5% of the project award for that initial year. Management fees for each subsequent year were requested at the time of submission of each annual work plan and budget. Each management fee requested equaled .5% of the project award for the respective budget year.

**6. NEON has a contingency reserve of about $74 million. It would seem that NEON is permitted to use these funds to pay any allowable costs it incurs. Private sector projects normally have two contingency fees – line item contingency that applies only to a single line item (such as the purchase of steel) and project contingency, that applies to the whole project.**

a. **Does NEON consider all its contingency funds as project contingency?**

Yes, NEON considers all its contingency funds to be project contingency.

b. **Would the NEON project only be over budget if it uses all of its contingency fees?**

The NEON project will only be over budget if it exceeds the $434 million currently authorized for the project. This $434 million includes the project contingency.

**7. Did you, Dr. Collins, have any input in NSF's decision to move forward with the NEON project while you were the NSF Assistant Director for Biological Sciences?**

It was my responsibility as Assistant Director for Biological Sciences to ensure that worthy projects proceeded appropriately. The worthiness of each project was determined using external peer reviews by members of the scientific community and I then developed a recommendation regarding funding for the Director of NSF. The final decision to move ahead and fund NEON within NSF's MREFC account was made by the Director of NSF.

a. **In addition, did you have any input on the final budget for the project?**

The peer review process determined a proposed budget and, then, as Assistant Director for Biological Sciences, I had the authority to conclude that the proposed budget was either too large or too small. In the case of NEON, I initially determined that the proposed budget was too large, and the organization subsequently proposed a smaller budget. As I noted in answering the last question, the final decision regarding a final budget for NEON was made by the Director of NSF.

b. **Did you have any input on the use of management fees?**

No.

**c. While you were at NSF, what was the written, internal policy for a potential conflict of interest when working on a project at NSF and then subsequently accepting a positon of Chief Executive Officer of said project?**

To clarify, I am Chairman of the Board at NEON. I was not and am not the Chief Executive Officer. I left my position at NSF in October 2009 and joined the NEON board in May 2011. I do not recall whether NSF had a "written, internal policy for a potential conflict of interest", but my understanding was, and is, that I was in compliance with applicable laws and policies when I joined NEON's board.

Questions from Representative Palmer:

**1. NEON sought the counsel of attorneys at Gibson Dunn in order to respond to the letter sent by Senators Grassley and Paul. Was this paid for out of the management fee, as well?**

**a. If yes: So not only were there thousands of dollars' worth of questionable purchases, but you also used the management fund to defend those purchases?**

**i. How much were attorney's fees?**

**b. If no: How did NEON pay for attorney's fees?**

NEON paid for counsel in this matter out of other funds of the organization. It did not pay for counsel from management fees.

**2. Is it also true that the attorneys at Gibson Dunn represent Tom Sheldon, the former CFO at NEON? If so, isn't that a conflict of interest?**

Gibson Dunn does represent Tom Sheldon. No conflict of interest exists because Tom Sheldon and NEON do not have divergent interests in this matter.

# Appendix II

ADDITIONAL MATERIAL FOR THE RECORD

PREPARED STATEMENT SUBMITTED BY SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY CHAIRWOMAN BARBARA COMSTOCK

Thank you Chairman Loudermilk, for convening this hearing, and let me congratulate you on your chairmanship and on your first hearing on this very important topic.

While I was not here for the first NEON hearing the Committee held in December, I have reviewed the testimony from that hearing and familiarized myself with the relevant issues in preparation for this hearing. The independent audit findings and other information about management of the NEON project show some taxpayer funds that were intended to support scientific research were diverted to problematic activities.

The National Science Foundation and the National Ecological Observatory Network have a Cooperative Agreement in the neighborhood of $433 million. A relatively small amount of that amount - several hundred thousand dollars - has been diverted to pay for things that don't support or strengthen the project: for instance, gourmet coffee service, tens of thousands of dollars for at least one lavish Christmas party, and additional hundreds of thousands of dollars for lobbying expenses.

Our national debt exceeds $17 trillion. Annual budget deficits of several hundred billion dollars per year are driving up the national debt at a fast clip.

Support for basic research is one of the most important areas of federal discretionary spending. Maintaining American leadership in science and innovation is the key to our nation's future economic prosperity and security. Basic research is about good jobs and a secure future. But in the current budget environment, just maintaining the current level of basic research support is a big challenge.

Our Committee authorizes funding for groundbreaking research financed by grants through the National Science Foundation. We have a constitutional obligation and a responsibility to ensure every dollar earmarked for scientific research is spent as effectively and efficiently as possible.

We want to be strong advocates for science, but the situation we will discuss today makes it more difficult to build and maintain support for science funding. We want to be strong advocates for federal support of basic research that advances science and the national interest. But that advocacy is made more complicated when our constituents learn of taxpayer dollars diverted to parties and lobbying.

It may be that nothing illegal has occurred, but taxpayer money has been spent (very) inappropriately. I look forward to hearing from NSF and NEON representatives about what went wrong and, even more, about what steps, including new legislation and new regulations, must be taken to ensure these problems never happen again.

Thank you Mr. Chairman, I yield back.

PREPARED STATEMENT SUBMITTED BY SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY MEMBER ELIZABETH ESTY

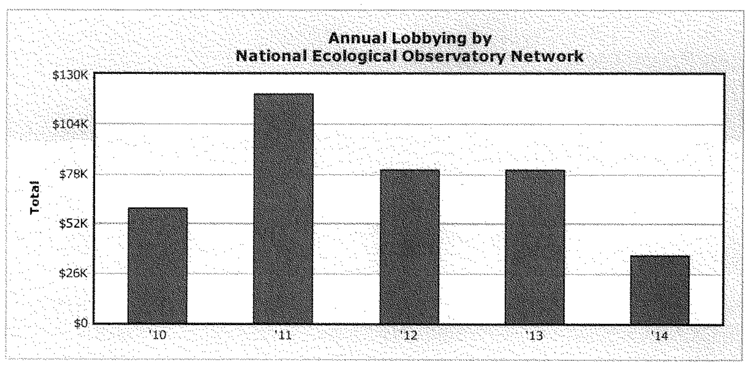
Thank you, Chairman Loudermilk and Chairwoman Comstock, and Ranking Member Johnson, for holding this hearing on the National Ecological Observatory Network (NEON). I also want to recognize and thank our witnesses from the National Science Foundation (NSF), NEON, and the Congressional Research Service (CRS) for their time and expertise.

In the last two months we have had two hearings on NEON and NSF's oversight of the project. We heard from five witnesses, including NSF Inspector General Allison Lerner, and the chairman of NEON, Dr. James Collins. These experts discussed the NEON Project's successes and struggles since its creation in 2008. Although they were called to be witnesses to discuss concerns regarding NSF's oversight of cooperative agreements, the witnesses made clear that NEON has done groundbreaking ecological sciences work, and the program will continue to inform our understanding of large-scale ecological systems. I look forward to working with the Committee to learn more about ecological sciences advancements, both at NEON and across the NSF.

SUBMITTED BY SUBCOMMITTEE ON RESEARCH AND TECHNOLOGY CHAIRWOMAN BARBARA COMSTOCK



# National Ecological Observatory Network




**Client Profile: Summary, 2014**

Year: 2014 ▼

A special interest's lobbying activity may go up or down over time, depending on how much attention the federal government is giving their issues. Particularly active clients often retain multiple lobbying firms, each with a team of lobbyists, to press their case for them.

**Total Lobbying Expenditures: $35,000**

Subtotal for Parent National Ecological Observatory Network: $35,000

National Ecological Observatory Network Lobbying by Industry

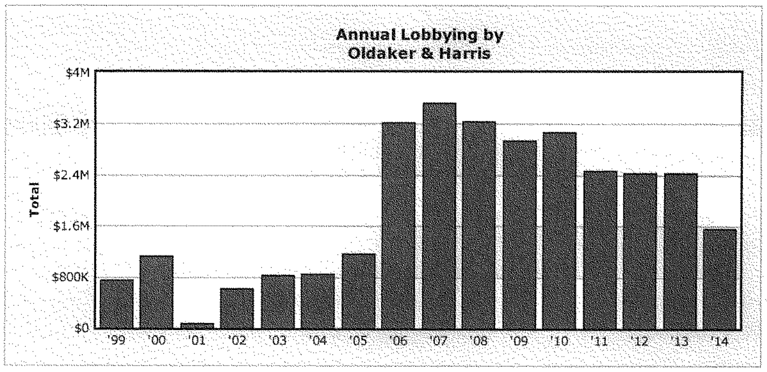
| Industry | Total |
|---|---|
| Environment | $35,000 |

Itemized Lobbying Expenses for National Ecological Observatory Network

| Firms Hired | Total Reported by Filer | Reported Contract Expenses (Included in Total Reported by Filer) |
|---|---|---|
| [illegible] Law Group | - | $35,000 |
| | | $35,000 |

NOTE: All lobbying expenditures on this page come from the Senate Office of Public Records. Data for the most recent year was downloaded on January 22, 2015.

# Oldaker Law Group




**Firm Profile: Summary, 2014**

Year: 2014
**Total Lobbying Income: $1,557,500**

Groups That Have Retained Oldaker Law Group:

| Client | Total | Subsidiary (Lobbied For) | Industry |
|---|---|---|---|
| Adventist Health Systems | $200,000 | - | Hospitals/Nurs Homes |
| American Health Care Assn | $40,000 | - | Hospitals/Nurs Homes |
| American Health Quality Assn | $30,000 | - | Human Rights |
| Columbia University | $40,000 | Columbia University Trustees | Education |
| Federation/Amer Soc/Experimental Biology | $40,000 | - | Misc Health |
| ICU Medical Inc | $10,000 | - | Unknown Business |
| Indyne Inc | $150,000 | - | Computers/Internet |
| Medicaid & Medicare Advantage Product Assn | $180,000 | - | Misc Health |
| National Assn/Shareholder & Consumer Attorneys | $240,000 | - | Lawyers/Law Firms |

| | | | |
|---|---|---|---|
| National Ecological Observatory Network | $35,000 | - | Environment |
| Natl Assn of Marine Laboratories | $27,500 | - | Agricultural Svcs |
| Neuralstem | $150,000 | - | Pharm/Health Prod |
| Nova Southeastern University | $200,000 | - | Education |
| Sea Grant Assn | $35,000 | - | Environment |
| State University System of Florida | $40,000 | Florida State Research Foundation | Education |
| SUNY Research Foundation | $15,000 | - | Education |
| University Corp for Atmospheric Research | $45,000 | - | Education |
| University of Chicago | $35,000 | - | Education |
| Vaisala Inc | $45,000 | - | Misc Mfg/Distrib |

NOTE: All lobbying expenditures on this page come from the Senate Office of Public Records. Data for the most recent year was downloaded on January 22, 2015.

SUBMITTED BY SUBCOMMITTEE ON OVERSIGHT
CHAIRMAN BARRY LOUDERMILK

6

The cognizant NSF program official for this grant is Elizabeth R. Blood (703)292-8470. The cognizant NSF grants official contact is Timothy Kashmer (703) 292-8242.

Sincerely,

Timothy Kashmer
Grants and Agreements Officer

---

From: Tom Sheldon [mailto:tsheldon@neoninc.org]
Sent: Thursday, January 08, 2009 1:27 PM
To: Kashmer, Timothy P.
Cc: 'Dana white'
Subject: RE: DBI0752017 Management Fee Request.pdf - Adobe Acrobat Standard

Thanks again! We have already established a unique "project" and separate cash account within our accounting system to keep all management fee activity isolated from other activities.

Tom

From: Kashmer, Timothy P. [mailto:tkashmer@nsf.gov]
Sent: Thursday, January 08, 2009 11:26 AM
To: Tom Sheldon
Subject: RE: DBI0752017 Management Fee Request.pdf - Adobe Acrobat Standard

Tom,

There is no rule or requirements for drawing down management fees for assistance awards. These are unauditable fees, therefore as far as we are concerned you can draw down the entire amount of the fee, but probably a good idea to keep it monitored into a separate account.

Tim

Tim P. Kashmir

Senior Grants and Agreements Officer

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

October 1, 2014

The Honorable Charles Grassley
The Honorable Rand Paul
United States Senate
Washington, DC 20510

Dear Senators Grassley and Paul:

Thank you for your letter of September 3, 2014 regarding the National Ecological Observatory Network (NEON), a major research facility funded by the National Science Foundation (NSF). Based on whistleblower information and a draft audit by the Defense Contract Audit Agency, you have raised several questions regarding the use of federal financial assistance in the form of a "Management Fee" provided by NSF to NEON. We welcome the opportunity to respond to all of your questions and to provide you with the facts necessary for any further discussion you may wish to have with NSF.

NSF's core mission is to promote the progress of science,[1] and we do so through our investment in a portfolio of more than 42,000 active awards designed to advance the Nation's innovation ecosystem.[2] Aside from individual research awards, NSF also funds major research facilities such as NEON. NEON is a complex network of sensors that will, among other advances, utilize airborne remote sensing data to improve our fundamental understanding of agriculture, plant/crop and land-use matters. NEON, Inc. is a private, not-for-profit corporation to whom NSF has provided federal financial assistance for the design, construction and early operations of the NEON network.

Among all of NSF's active awards, only fifteen utilize management fees. Management fees are an item above cost, or profit, earned by an organization, and do not implicate the Byrd Anti-Lobbying Amendment. The Office of Management and Budget has long held that fees or profit, for purposes of the Byrd Anti-Lobbying Amendment, are *not* considered appropriated funds. See Office of Management and Budget (OMB) 1990 Federal Register notice providing, in part, a government-wide clarification that "[p]rofits, and fees that constitute profits, earned under Federal grants, loans, and cooperative agreements are not considered appropriated funds." 55 Fed.Reg. 24540, 24542 (June 15, 1990). It is also notable that the soon-to-be implemented update to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR Part 200) re-affirms that profit may be earned or kept where expressly authorized by the terms and conditions of the Federal award. See 2 CFR 200.400(g).

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[1] NSF's mission is "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." The National Science Foundation Act of 1950 (Public Law 81-507).

[2] NSF FY 2013 Performance and Financial Highlights notes, among other data, that last year NSF invested in 1,922 colleges, universities and other institutions, evaluated 49,000 proposals through competitive merit review and funded 10,800 competitive awards.

NSF uses management fees on less than 0.04% of awards, and only includes management fees in unique cases like NEON, Inc. when we are working with specialized nonprofit research organizations on large scale projects. These organizations typically have limited or no other sources of funding. The purpose of the management fee in many of these cases, therefore, is to facilitate the basic operations and viability of these nonprofits, so that our overall investment remains sound.

NEON, Inc. has received a management fee associated with the NEON awards amounting to slightly over one-half of one percent of estimated award costs. Initial NSF considerations for provision of a management fee were in part based on NEON, Inc.'s need to accumulate some level of assets to secure a line of credit for the organization. As noted in your correspondence, on December 8, 2008, NEON, Inc. formally requested payment of a management fee. NSF reviewed and approved the request consistent with our practices. Again, management fees constitute profit or fees earned by an awardee and are not considered appropriated funds.

Nonetheless, NEON, Inc.'s subsequent use of this management fee is disconcerting, especially regarding expenditures like the ones you identified – expenditures that appear inconsistent with the initial request provided to NSF for the fee. In fact, and prior to your letter, NSF had already initiated action to examine NEON, Inc.'s prior representations and justifications regarding the management fee. In July 2013, for example, NSF declined a request from NEON, Inc. to increase the amount of management fee paid under its awards. Additionally, NSF had informed NEON, Inc. that a management fee for its award for early operations of the NEON network would not be provided at this time, pending further review. We note, however, that our review of this matter does not include the draft audit report performed by the Defense Contract Audit Agency and mentioned in your letter. NSF has not yet received a copy of this document in draft or in final form, and we will certainly consider and take into account any audit report that may be issued.

In addition to reviewing NEON, Inc.'s justification of its management fee, we are continuing to re-assess our policies and practices regarding management fee administration. We have assigned this matter to the NSF Chief Financial Officer/Head of the Office of Budget, Finance and Award Management (BFA), who will work with senior staff of the agency to develop proposed practices, following careful consideration of best practices at other federal agencies. At that point, this matter will be further reviewed by the Audit and Oversight Committee of the National Science Board.

Below we provide responses to each of your five questions. Our staff has prepared an appendix to this letter, which includes a detailed accounting of unallowable costs incurred by NEON, Inc. from its inception to the present, as well as other documents responsive to your request. Some of the materials provided may contain business proprietary information, so we ask you to treat them accordingly.

Responses to Specific Questions Set Forth on pages 3-4 of Your Letter

1. **Please provide all correspondence with NEON related to "management fees" and unallowable costs from its inception to the present.**
   *Response: Please see the appendix and attachments.*

2. **Please provide a detailed accounting of all unallowable costs incurred by NEON from its inception to the present.**
   *Response: Please see the appendix and attachments.*

3. **Was NSF aware that NEON was funding otherwise unallowable costs with the management fee?**
   a. **If so, what legal justification permitted this grant authorization in spite of OMB Circular A-122?**
   *Response: NSF understood that NEON, Inc. used its management fee in part to cover costs that were not reimbursable or otherwise unallowable. One component of management fee as a profit or item above cost provides for coverage of ordinary and necessary expenses that are not reimbursable. NSF does not provide this fee on an incurred cost basis. The management fee represents the parties' agreement as to a fixed amount constituting a fee or profit earned by the awardee. Typically it is determined at the origination of an award or at times on an annual basis prospectively within an award period. As an item above cost and not based within the context of reimbursement for incurred costs, the management fee is not subject to OMB Circular A-122. As provided in the purpose of the Circular, "[p]rovision for profit or other increment above cost is outside the scope. . ."*

   b. **If so, what legal justification permitted the funding of lobbying in spite of the Byrd Anti-Lobbying Amendment?**
   *Response: OMB's 1990 Federal Register notice published in connection with its implementation of the Byrd Amendment provides, in part, a government-wide clarification that "[p]rofits, and fees that constitute profits, earned under Federal grants, loans, and cooperative agreements are not considered appropriated funds." 55 Fed.Reg. 24540, 24542 (June 15, 1990).*

4. **What portion(s) of NEON's Policies and Procedures manual was derived from language suggested by the National Science Foundation, or copied from other NSF policy guidebooks? Please provide specific page references, particularly with regards to references of "unallowable costs" or "management fees."**
   *Response: NSF is not aware of any portion(s) of NEON, Inc.'s Policies and Procedures manual that was derived from language suggested by the National Science Foundation, or copied from other NSF policy guidebooks. We do note that in 2008, when NEON, Inc. was initially developing a Policies and Procedures manual, that NSF reviewed and provided comment on the draft manual to ensure that the draft policies and procedures were sufficient and in compliance with federal standards.*

**5. In the past five years, have other NSF grantees received compensation in the form of "management fees"? If so please list for each grantee:**

- **a. The amount of "management fees" granted for each year they were awarded,**
- **b. The alleged purpose(s) of the monies,**
- **c. What portion of the management fee covered unallowable costs, *and***
- **d. The justification for granting awards for any unallowable costs that were covered.**

*Over the past five U.S. Government Fiscal Years (GFY 2010-2014) six NSF awardees have received management fee in addition to NEON, Inc. These are: (i) Associated Universities, Inc., (ii) Association of Universities for Research in Astronomy, Inc., (iii) Incorporated Research Institutions for Seismology, (iv) SRI International, (v) University Corporation for Atmospheric Research, and (vi) UNAVCO, Inc. The amounts by Fiscal Year awarded to each are set forth in the following table.*

| AWARDEE | USG FISCAL YEAR | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Associated Universities, Inc. | $450,000 | $425,000 | $425,000 | $425,000 | Under Neg. |
| Association of Universities for Research in Astronomy, Inc. | $374,000 | $400,000 | $400,000 | $475,000 | $475,000 |
| Incorporated Research Institutions for Seismology | $25,000 | $25,000 | $25,000 | $25,000 | Under Neg. |
| SRI International | N/A | $36,816 | $33,354 | $31,615 | $31,843 |
| University Corporation for Atmospheric Research | $250,000 | $250,000 | $250,000 | $500,000 | $500,000 |
| UNAVCO, Inc. | $40,000 | $40,000 | $40,000 | $40,000 | Under Neg. |

*Management fees are an item above cost, or profit, earned by an organization. NSF provides fee to these organizations after considering among other points: (1) financial or other liability or risk assumed, (2) retained earnings used to fund work, (3) facilities capital acquisition plans, (4) working capital funding, (5) addressing unreimbursed costs deemed ordinary and necessary for operations, (6) the utility of fee as a performance incentive, and (7) fee to attract qualified organizations. Most of these organizations have limited or no other sources of funding. The purpose of the management fee in many of these cases, therefore, is to facilitate the basic operations and viability of these nonprofits, so that our overall investment remains sound.*

> *Given that the fees awarded are discretionary funds, NSF does not require that its awardees report how those monies are expended; thus, we do not require that the awardees submit an accounting of how they may cover otherwise unallowable costs with management fee.*

Again, we would like to express our gratitude for your letter calling attention to important matters of oversight. We are committed to strengthening our policies and practices to advance the progress of science in our nation.

Sincerely,

France Córdova
NSF Director

Dan E. Arvizu
NSB Chairman

**CONTRACTOR DATA FORM**
**DCAA MID-ATLANTIC REGION COMPENSATION TEAM RST-6**

| | |
|---|---|
| FAO: | CONTRACTOR: |
| FAO ASSIGNMENT #: | CFYE (Month and Year) : |
| AUDITOR: | DATE RESULTS NEEDED BY: |

| | | | CONTRACTOR DATA: | | % | % | # |
|---|---|---|---|---|---|---|---|
| SIC/NAICS CODE: | CODE | DESCRIPTION | YEAR | SALES | GOVT | ADV | EMPLYS. |
| PRIMARY | | | 20__ | | | | |
| SECONDARY | | | 20__ | | | | |

*EXECUTIVE DATA*

| CFY | EXEC POSITION | SALES SCOPE | % TIME DIRECT | BASE SALARY | BONUS | PENSION | HEALTH/ LIFE INS. | AUTO | DEFERRED COMP. | LTI/ OTHER* | VOL. DELS. | CLAIMED COMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | Chief Executive Officer - Lea | | | $ 290,000 | | $ 17,400.00 | $ 11,887.46 | | $ - | $ - | $ - | $ 290,000 |
| | Chief Financial Officer - Sheldon | | | $ 213,623 | | $ 12,817.38 | $ 8,112.78 | | $ - | $ - | $ - | $ 213,623 |
| | Chief Operating Officer - Laursen | | | $ 210,000 | | $ 12,600.00 | $ 11,820.38 | | $ - | $ - | $ - | $ 210,000 |
| | Chief Education & Public Engagement - Gram | | | $ 190,635 | | $ 11,438.10 | $ 8,155.94 | | $ - | $ - | $ - | $ 190,635 |
| | Chief External Affairs -Wee | | | $ 164,325 | | $ 9,859.50 | $ 4,273.36 | | $ - | $ - | $ - | $ 164,325 |
| | Chief Human Resources Officer - Martin | | | $ 201,436 | | $ 12,086.16 | $ 11,806.86 | | $ - | $ - | $ - | $ 201,436 |
| 20__ | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| | 4 | | | | | | | | | | | |
| | 5 | | | | | | | | | | | |
| | 6 | | | | | | | | | | | |
| | 7 | | | | | | | | | | | |
| | 8 | | | | | | | | | | | |
| | 9 | | | | | | | | | | | |

*Detail of "Other" compensation:



ENCLOSURE

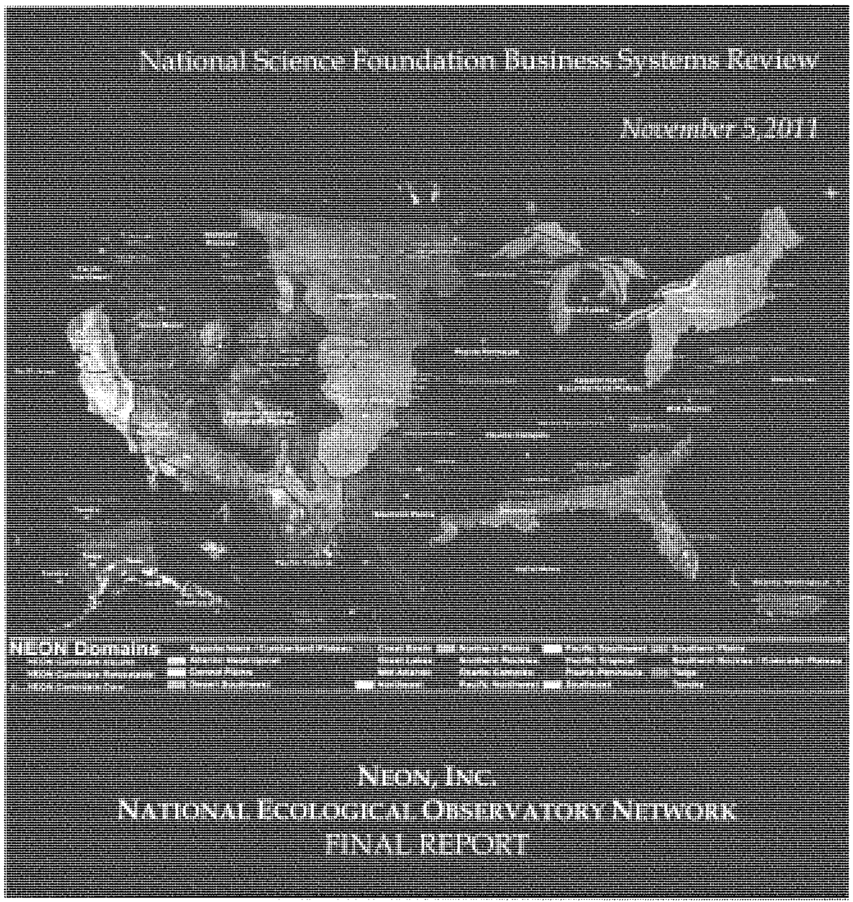


*Image Credit: http://www.neoninc.org/domains/overview*

## BUSINESS SYSTEMS REVIEW SITE VISIT DATES AND PARTICIPANTS

| | |
|---|---|
| **Review Dates and Locations** | |
| BSR Site Visit Date:<br>Location:<br>Awardee: | July 31, 2011 – August 3, 2011<br>Boulder, CO<br>**NEON, Inc.** |
| BSR Introductory Site Visit Date:<br>Location:<br>Awardee: | August 25, 2010<br>Boulder, CO<br>**NEON, Inc.** |
| **National Science Foundation BSR Team Member Participants** | |
| Blood, Liz | *Program Director*, BIO OAD, **NSF** |
| Futrell-Griggs, Montona | *Project Manager*, Division of Biological Infrastructure, **NSF** |
| Kashmer, Tim | *Acting Branch Chief*, Division of Acquisition and Contract Support, **NSF** |
| Mallinoff, Sonya | *Senior Advisor for Planning*, Analysis and Operations, BIO, **NSF** |
| O'Malley, Donna | *Financial Operations Specialist*, Division of Astronomical Sciences, **NSF** |
| Paulos, Bob | *Associate Director*, **IceCube Project UW – Madison, Antarctic Astronomy and Astrophysics Research Institute** |
| Rabanal, Florence | *Facilities Management and Oversight Advisor and BSR Team Leader*, Large Facilities Office, **NSF** |
| Stein, Erica | *Grant and Agreement Specialist*, Division of Acquisition and Contract Support, **NSF** |
| Bryant, Bill | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Haerr, Mark | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Mannion, Brian | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Oyekan, Akin | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Reese, Joshua | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Sowa, Joyce | *Contractor Support to NSF*, **Booz Allen Hamilton** |
| Worthy, Eleanor | *Contractor Support to NSF*, **Booz Allen Hamilton** |

| Awardee BSR Participants | |
|---|---|
| Anderson, Larry | *Director of Procurement and Contracts,* **NEON, Inc.** |
| Beasley, Tony | *Chief Operating Officer,* **NEON, Inc.** |
| Bolyard, Jody | *Director of Environmental Health and Safety,* **NEON, Inc.** |
| Faas, George | *Logistics Manager,* **NEON, Inc.** |
| Keller, Justice | *Payroll and Records Manager,* **NEON, Inc.** |
| Maclin, Julie | *Senior Accountant,* **NEON, Inc.** |
| Martin, Robin | *Chief of Human Resources,* **NEON, Inc.** |
| Nowicki, Mary | *Project Accounting Supervisor,* **NEON, Inc.** |
| Pendleton, Dwayne | *Assistant Director of Procurement,* **NEON, Inc.** |
| Rozsa, Zsofia | *Learning and Development Manager,* **NEON, Inc.** |
| Ryan, Jill | *Director of PMCS,* **NEON, Inc.** |
| Schimel, Dave | *Interim Chief Executive Officer,* **NEON, Inc.** |
| Sheldon, Tom | *Chief Financial Officer,* **NEON, Inc.** |
| Waugh, Juli | *Total Rewards Manager,* **NEON, Inc.** |
| White, Dana | *Controller,* **NEON, Inc.** |
| **BSR Guide:** | September 24, 2010 (Final Version 3.1) |

## TABLE OF CONTENTS

## LIST OF TABLES

## EXECUTIVE SUMMARY

Staff from the National Science Foundation's Budget, Finance and Award Management's (BFA) Large Facilities Office led a team to conduct a business systems review (BSR) of the administrative business systems supporting the National Ecological Observatory Network (NEON) Facility. The site visit occurred between July 31, 2011 and August 3, 2011. The purpose was to ensure that NEON's business support systems are in compliance with governing Federal regulations and that they meet NSF's expectations for stewardship of Federal funds.

The business systems for eight core functional areas (CFAs) were examined:

1. General Management
2. Award Management
3. Budget and Planning
4. Financial Management
5. Finance Reporting
6. Human Resources
7. Procurement
8. Property and Equipment

Although the administrative business systems supporting the NEON Facility are in alignment with Federal regulations, a number of high risk issues were identified across all CFAs. For some, the nature of issues (*e.g.*, financial management written procedures) and/or the number of concerns (*e.g.*, property and equipment) are potentially serious and if not attended to and closely monitored may have systemic impacts. For these reasons, the systems supporting these CFAs do not meet NSF's expectations for the stewardship of Federal funds.

*Summary of BSR Results*

The BSR examined and evaluated the business systems in the eight CFAs previously outlined. This section summarizes the review results categorized as Areas of Concern, Areas for Improvement and Best Practices for each CFA. Areas of Concern identify those areas that indicate business system deficiencies or noncompliance with Federal requirements. Addressing these areas is mandatory. The Areas for Improvement category outlines those actions that the reviewers believe would improve the business systems pertaining to a particular CFA. Addressing the Areas for Improvement[1] is not mandatory. Best Practices identify the business practices, procedures and policies that exceed the expectations of a proficient business system.[2]

A summary of BSR results is presented below in Table 1. Further details and observations supporting these results are available in the CFA sections of this report.

**Table 1. List BSR Results**

| RESULTS - AREAS OF CONCERN |
|---|
| **GENERAL MANAGEMENT** |
| None identified. |
| **AWARD MANAGEMENT** |
| None identified. |
| **BUDGET AND PLANNING** |
| None identified. |
| **FINANCIAL MANAGEMENT** |
| None identified. |
| **FINANCIAL REPORTING** |
| FR-1: Develop written procedures for minimizing the time between transfer of funds from NSF and disbursement by NEON (*i.e.*, 3-4 days). In accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Payment[3] subsection, organizations operating on an advance basis must have written procedures to minimize the time between receipt of funds from federal agencies and payments to vendors/payroll. NEON needs to strengthen existing procedures to address Federal regulations. |

[1] The NSF Program Manager may require that select/all areas for improvement be addressed as part of the follow-up and monitoring process.
[2] These may be shared with other NSF Awardees and Large Facilities with permission from the Awardee.
[3] 2 CFR 215.22

| RESULTS - AREAS OF CONCERN | |
|---|---|
| FR-2: | Develop policy guidance to identify, record, and report program income in accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Program Income subsection.[4] Recipient organizations are required to account for program income related to projects supported with federal funds. This process should be documented in the NEON policies and followed when reporting quarterly on the FFR. |
| **HUMAN RESOURCES** | |
| None identified. | |
| **PROCUREMENT** | |
| None identified. | |
| **PROPERTY AND EQUIPMENT** | |
| PE-1: | A physical inventory should be conducted in accordance with the provisions of t the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Equipment.[5] The inventory should be conducted at least once every two years, with verification of existence and location of the equipment as well as information on current condition and utilization. Inventory information should be reconciled with the accounting records. The *PPM* does not go into detail on the procedures or processes that should be followed for the reconciliation process nor is there any emphasis in the manual on the need to ensure that the inventory is updated promptly. This should be addressed. |

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| **GENERAL MANAGEMENT** | |
| GM-1: | Existing organizational charts and other materials used to depict/describe the organizational structure supporting NEON should be clarified and address the various concerns related to clarity. |
| GM-2: | Alternate organizational structures should be explored, with special attention to the overall size of management and strategies used for integration across groups. |
| GM-3: | NEON, Inc. should revisit its plans for implementing an audit and oversight activity and accelerate the standup date. While the function-specific activities and training could continue to be managed in a distributed fashion, a consistent organizational-wide framework to govern operational protocols should be coordinated and managed through a single group. This framework should include roles, responsibilities for ensuring continuous compliance, and corresponding processes with timelines. |

[4] 2 CFR 215.24

[5] 2 CFR 215.34 (f)(3)

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| GM-4: | Develop a process for individuals to acknowledge NEON, Inc.'s policies on ethics and standards of conduct and COI. It should also explain how instances of noncompliance are tracked and resolved and communicated to other affected groups. The *PPM* should be expanded to document these details and staff should be trained. |
| **AWARD MANAGEMENT** | |
| AM-1: | Update NEON, Inc., policies, procedures, NEON Responsibility Matrix, and position descriptions to ensure segregation of duties for award management. In particular, the procedures ought to specify that one individual or group is responsible for compliance and a different individual or group is responsible for monitoring compliance. |
| AM-2: | Implement updates to policies, procedures and PDs and ensure they align with the changes to segregate duties. As an immediate first step the SRO's AM responsibilities should be immediately transferred from the PI to the SRO. |
| AM-3: | Issue the individuals assigned to AM responsibilities to a FastLane (FL) user account and/or other authorizations and permissions to accomplish AM functions. |
| AM-4: | Revisit and strengthen the current approach to assigning AM responsibilities such as the monitoring of award terms and conditions. The written procedures ought to implement a strategic approach to communication of award terms and conditions, amendments to those terms and conditions, and roles and responsibilities for compliance that includes all organizational stakeholders. |
| AM-5: | Ensure that the written procedures practices align with associated SRO's responsibilities. |
| **BUDGET AND PLANNING** | |
| BP-1: | Finance and PMCS should immediately examine alternative ways to account for labor actuals that would allow a more standard way of reporting EV. The NSF requires clear, concise EV reports that accurately reflect performance. |
| BP-2: | The connection and communication between the Finance group and the PMCS group should be strengthened. NEON, Inc. should investigate formal structures that would facilitate routine interaction between these two groups. One approach may be to hire a business manager to serve as a technical liaison between the two groups. In the interim, these two groups should set routine meetings to collectively discuss issues related to budget data and revise joint solutions. |
| BP-3: | An organization-wide approach to compliance monitoring terms and conditions ought to be developed. If the procedures require functional groups such as PMCS, to be involved with monitoring then training should be provided to ensure that staff understand the associated expectations and responsibilities. |
| BP-4: | The year-end budget closeout process needs to be more fully documented. Existing documentation ought to more clearly specify how and when variances, for example, are reconciled between the NEON, Inc. accounting system and COBRA. |

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| **FINANCIAL MANAGEMENT** | |
| FM-1: | Ensure that materials (organizational charts and references in *PDs, PPM*, and the *Accounting Manual*) are consistent and aligned with roles and responsibilities of FM staff. Titles, terms, and *PD* duties should reflect current operating positions. The *PPM* and the *Accounting Manual* should be updated to ensure that references to the Finance Department and job titles of staff are consistently referred to throughout. |
| FM-2: | Priority should be given to completing the *PPM* and the audits sections of the *Accounting Manual*. Internal audit control mechanisms should be developed documented and implemented checking basic internal control processes on a routine basis. Further basic protocols for handling external auditors should be developed and implemented immediately with all audits. |
| FM-3: | Policies, procedures and practices should be revised to ensure CFO participation and concurrence in all financial representations for NEON, Inc. This will provide for necessary checks and balances to the process. |
| FM-4: | The CFO should organize support documentation related to the development of the indirect cost rate identified in the cost proposal and include a narrative that clearly explains how the rate was developed. This should also include a justification to support the indirect cost recovery in the construction cost proposal should be documented. Further, all appropriate functional representatives should participate in discussions with the DCAA auditors. |
| FM-5: | Develop a policy and practice to address allowability of Employee Morale Costs. Written policies and procedures on employee morale should be included in the *PPM* and address the responsibilities of the new Employee's Activity (EA) group. Clear distinctions should be made between those EA sponsored activities that are considered allowable and those considered unallowable. All expenses associated with these types of costs that have been incurred should be reviewed for allowability, allocability and reasonableness. Charges that would be considered unallowable in context of the new policy should be removed from the NSF award. Ensure that the policy fully complies with the Cost Principles for Non-Profit Organizations[6] and Employee Morale, Health and Welfare Costs[7] and Entertainment Costs.[8] |
| FM-6: | Review written protocols pertaining to support documentation and ensure that proper justification for expenses is required. Training should be provided to review the protocols and alignment of associated practices. |



[6] 2 CFR 230
[7] 2 CFR 230 Appendix B.13
[8] 2 CFR 230 Appendix B.14

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| **FINANCIAL REPORTING** | |
| FR-3: | Roles and responsibilities for all financial reporting activities should be clearly identified in the *PPM* and the *Accounting Manual*. These descriptions should reconcile against each other and correspond to the job titles for the respective position descriptions. |
| FR-4: | Procedures and detailed step-wise methodology used to develop cash requests and FFRs should be documented. These should include information on specifying the source of information used to calculate the cash request amount and the FFR totals. |
| FR-5: | FastLane procedures for assigning the FL users access and, in particular, the financial functions, should be developed and documented. Procedures should include delegated responsibilities in the absence of the CFO and address segregation of FastLane functions to ensure that conflicts of interest are avoided. |
| **HUMAN RESOURCES** | |
| HR-1: | NEON, Inc. should consider investigating other organizational structures for the improvement of HR operations. There may other organization arrangements that are more efficient and effective. |
| HR-2: | NEON, Inc. should ensure that it addresses outstanding NSF-stated concerns and expectations related to the development of a succession plan. |
| HR-3: | HR should outline a strategy to deliver training courses on high risk issues to all NEON, Inc. staff with the initial focus on required job functions and compliance concerns such as safety, travel and expense reporting, and procurement policy. |
| HR-4: | NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with discrimination against persons based on race, color, national origin, sex, or handicap. Current practices are not structured and have resulted in select requirements not being addressed. |
| HR-5: | NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with drug-free policies. |
| HR-6: | While NEON, Inc. are planning strategies to manage their workforce, these are mostly short-term an informal in practice. More structured short and long-term workforce planning should be developed and written. It should include a consistent approach to aligning the workforce with NEON's mission and objectives. |
| HR-7: | The staffing strategy for operations has been delayed due to changes in funding. NEON, Inc. should develop a model for more easily determining staffing levels under different funding scenarios. This would enable HR to better plan. |
| HR-8: | The NEON, Inc. succession plan for C-level positions should be completed and submitted to NSF as expected. |

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| HR-9: | The Performance Assessment Program should be completed, documented and executed as soon as possible, within the next six months. This is especially important given the growth in staff during construction and need to maintain and retention the organization. |
| HR-10: | NEON, Inc.'s compensation analysis should be reviewed to include market data from only not-for-profit organizations (*e.g.*, academic institutions, Federal and State Governments, and non-profits). NEON, Inc. should work with NSF Program to review the results and determine the appropriate next steps if excluding the "for profit" comparisons results in significant differences to salary ranges. |
| **PROCUREMENT** | |
| PR-1: | P&C should develop a tracking process to ensure proper checks and balances are maintained in practice as outlined in the *PPM* and *PCGM*. |
| PR-2: | Include all individuals with delegated authority to enter into lease agreements into the Approval Authority matrix. |
| PR-3: | Conduct annual training sessions for P&C staff to reiterate the Standards of Conduct policy and the Conflict of Interest requirements. |
| PR-4: | Given the large amount of construction planned during the near future and the wealth of minority-owned firms and small business in the construction trades, NEON should revisit their five year goal and develop a plan to actively seek under-representative participation. |
| PR-5: | Develop desktop procedures for the review and approval process for all subcontract invoices to ensure that the contracted work effort is consistent with the criteria established in the contractual agreements. |
| PR-6: | Include all required flowdown provisions that are identified in the *PPM* and *PGCM*, including the termination for convenience clause, as part of the Federal Regulatory Flowdown References[9] section in the *PCGM*. |
| PR-7: | Ensure that practices and procedures outlined in the *PPM* and *PGCM* for subaward monitoring activities are followed. NEON has had limited opportunity to put these policies and procedures into practice but are encouraged to ensure that these will be followed. For example, P&C should develop a form to collect information from subrecipients' A-133s. |



[9] PCGM Section J

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| **PROPERTY AND EQUIPMENT** | |
| PE-2: | Internal operating procedures and PDs should accurately reflect the roles of staff performing the PE monitoring roles. Roles and responsibilities of property management staff should be clearly stated in the *PPM* consistent with their position descriptions. Roles of the Logistics Manager, the Warehouse Supervisor, Property Specialist, and Domain Property Administrators with regard to inventory control and data management should be specified in the *PPM*. |
| PE-3: | Current operating procedures should be identified. The *PPM* should provide policies and procedures for staff on current operating practices for property management to ensure that appropriate practices are followed. |
| PE-4: | Develop a structured in-house training program, including refresher training, for property custodians and all staff involved in the various lifecycle stages of property management. The program should include a focus on their responsibilities for personal property management, usage, and disposal. |
| PE-5: | Develop a process to ensure that all proposed equipment purchases are screened against the current inventory list to ensure that the proposed asset is not readily available within the institution prior to purchasing it. Acknowledgement (*i.e.*, check box) that the screening took place should be included in the PR statement. |
| PE-6: | Ensure that the property management system has the functionality to record warranty information and produce the required maintenance reports. This is an important component for management of property, particularly at remote sites, and NEON is encouraged to proceed quickly with this functionality implementation. |
| PE-7: | Revise the Equipment disposition process in the *PPM*. Several items should be addressed: identify the personnel who are responsible for contacting an agency property manager when an item of GOE is considered excess, specify how income is treated as a result of a disposition or salvage, and explain the methods and processes for determining the conditions under which equipment could be transferred, sold, or loaned to another institution. |
| PE-8: | The Equipment Inventory Form should be revised. Guidance instructions should be developed on completing the form. The form indicates that the departments should submit completed forms to "A&FS Equipment Management" but this entity is not reflected on any of the organizational charts. |
| PE-9: | Provide more detailed instructions to staff for completing and submitting forms identified in Appendices of the *PPM* to ensure that the forms are completed correctly and are forwarded to the appropriate office for review (Appendix B - Capital Asset Disposal Forms, Capital Asset Donation/Scrap Forms, and Capital Asset Disappearance/Theft forms. |

| RESULTS - AREAS FOR IMPROVEMENT | |
|---|---|
| PE-10: | Specific authority levels for the property management database should be identified and documented. Clearly identify staff and authority levels to access, update, and change records in the Maximo property asset module to ensure that there is integrity of data. |
| PE-11: | Document the step-by-step procedures used to tag equipment and record the information into the Maximo module. It is unclear from the review of the Property and Equipment Management Overview of the *PPM*, how equipment is tagged, either at the warehouse or at the remote site. NEON, Inc. should ensure that all capital assets are recorded timely and accurately in the system. The procedures should include a standardized location to tag equipment to facilitate the inventory process. |
| PE-12: | Consider utilizing GSAXcess to acquire excess government property which might be useful as the project moves into the construction phase. Participation in the program will conserve supply and equipment funds while supporting reutilization. |
| PE-13: | Consider developing policies and procedures to document expenditures for equipment charged to more than one funding source. During discussion, the CFO indicated that these procedures would be developed if the need arose to do so in the future. |

| RESULTS - BEST PRACTICES |
|---|
| **GENERAL MANAGEMENT** |
| None identified. |
| **AWARD MANAGEMENT** |
| None identified. |
| **BUDGET AND PLANNING** |
| None identified. |
| **FINANCIAL MANAGEMENT** |
| None identified. |
| **FINANCIAL REPORTING** |
| None identified. |
| **HUMAN RESOURCES** |
| None identified. |
| **PROCUREMENT** |
| None identified. |
| **PROPERTY AND EQUIPMENT** |
| None identified. |

## 1.0 BACKGROUND[10]

NEON is a Major Research Equipment and Facilities Construction (MREFC) project, funded by NSF. Management of the construction and operation phases are the purview of NEON, Inc., an independent 501(c) (3) corporation created to manage large scale ecological observing systems on behalf of the scientific community. Many other U.S agencies and Non-Governmental Organizations are cooperating in this project, in addition to institutional members such as universities, museums and scientific associations.

As part of its mission, NEON will enable the understanding and forecasting of the impacts of climate change, land use change and invasive species on continental scale ecology by providing infrastructure and consistent methodologies to support research and education in these areas. NEON has partitioned the United States into 20 eco-climate domains. Each domain will have one core observational site and 2 relocatable sites.

In 2008, initial funds were provided by NSF to NEON, Inc. for organizational and project management support to complete the NEON construction-ready design and *Project Execution Plan*. In late FY2010 civil construction began on site preparation, a prototype tower, and observation hut at Sterling Colorado. As a prototype site, "Sterling" was built to test field construction and logistics planning, including adequate control of environmental impacts during tower construction. During the MREFC-funded NEON construction, the Sterling civil infrastructure will be adopted by the Project and will be outfitted for sensors, eventually to become the domain 10, relocatable site #2 in NEON Observatory operations. It will remain a test site for field deployment purposes even during operations, where new sensor mounts and equipment can be tested. The Sterling prototype site was formally accepted by NEON, Inc. in late 2010. In August 2011, the NEON project was approved by the National Science Board and initial construction funds were awarded. Construction of the core sites in Colorado and the Northeast is expected to begin early in Fiscal Year (FY) 2012.

NEON Inc. Headquarters is located in downtown Boulder Colorado. NEON's Calibration/Validation and Sample Audit Laboratory, which will calibrate all sensors for NEON on an annual basis and monitor the quality of physical samples and related laboratory analysis is co-located at Headquarters. During construction, Headquarters also serves as the primary central location for the NEON, Inc. administrative business support staff. In the future, as construction progresses, other administrative staff members will be located at the operating facilities with the 20 core sites. Total NEON, Inc. staffing is expected to peak at approximately 247[11], levels that will be maintained during the operations phase as well.



[10] Text for this section has been extracted verbatim, and in select cases, adapted from various sources including, The NEON Strategic Plan, the FY 2011 NSF Budget Request to Congress and http://ibrcs.aibs.org/overview/index.html

[11] Discussed with NEON, Inc. HR staff during the August 2011 BSR Site Visit.

## 2.0 SCOPING

Scoping activities involved a review of the principles in the BSR Guide, discussions with the NSF program managers[12] (PM), teleconferences with Awardee and Facility staff, as well as a reviews and analyses of background documentation[13] related to supporting the business systems. These resulted in the development of the broad review strategy and individualized CFA review plans. The BSR team also considered previously conducted reports and audits as sources of input when formulating the scope of review for each CFA. These sources, as noted in the following paragraphs, were utilized in order to coordinate and build upon previous work that has been conducted:

*NSF Audits/Reviews*

**NEON Conceptual Design Review:[14]**

NSF convened a panel in November 2006 to "review the scope and implementation plans for NEON, including management plans and budgeting, and determine if all major risks with this project have been identified, whether the initial functional requirements (performance requirements, major system components, and cyberinfrastructure interfaces) have been produced for the major NEON systems, and if the elements of the continental design and infrastructure deployment plans are well justified." The panel noted that the overall scope of the scientific goals was broad reaching, ambitious, and transformational. However, it identified several recurring themes and noted some concerns across the NSF "charge to the panel" that NEON needed to address before the Preliminary Design Review. The panel's observations included the following:

- The evolution of the management structure of the project from a series of workshops to one with a Board of Directors was good; however, it raised the concern of appearing "inward facing" given the ratio of members from the community versus members chosen by the Board.
- Overall lack of documentation for plans, processes/procedures, roles and responsibilities.
- NEON current staffing was very limited, especially key personnel needed to plan for the preliminary design review. The panel stressed the need for an experienced project manager to work with the CEO to "define the scientific, technical, and educational requirements of the project." In addition, managers of the Level 2 WBS elements were needed for the further development of the project requirements.

[12] The terms NSF Program Officer and NSF Program Manager are referred to interchangeably throughout the document.
[13] The contents of the NSF Briefing Packet include terms and conditions from Cooperative Agreements, description of the Large Facility from the *NSF Budget Request to Congress*, recent quarterly reports, Awardee and Facility organizational charts, AMBAP review summary reports, most recent A-133 audit, and recent cognizant audit or other oversight agency review reports and analyses related to the Facility.
[14] Text extracted verbatim from the *Conceptual Design Review Report*.

- Identifying a permanent location for the NEON headquarters was of paramount importance and would be instrumental in hiring critical management positions.
- Cost breakdown for all infrastructure for base lining purposes was needed as well as the preparation of a project schedule and identification of a critical path.
- Defining, and planning for the transition from construction through commissioning to early science operations. This was noted as a significant challenge to both NEON and NSF because of the staggered installation of the domain sites.
- Development of a feasible maintenance and operations budget consistent with feasible funding levels within the NSF biology budget.
- NEON should prepare for the Preliminary Design Review by internally reviewing the construction project work plan, cost estimate, risk analysis and bottom-up schedule development.

**NEON Preliminary Design Review:[15]**

NSF convened a panel in June 2009 to "formally examine the NEON engineering design, budget, schedule and PEP and to advise NSF on the sufficiency of the PDR baseline and projected FDR project planning and make recommendations regarding any areas where insufficiencies are identified." The panel's observations to specific NSF charge questions included:

- The NEON project had sufficient capacity and capability to bring the project planning to an FDR-ready construction execution plan and transition into the construction phase. The only exception was the Operations area, which still needed a department head. The panel recommended that the new head of operations report directly to the project director to allow him/her sufficient authority to advocate Operations interests and avoid a conflict with the Project Manager over construction interests.
- The project management processes had been documented in great detail but there was a systematic lack of top-level documents that provided simple summaries of those processes and identified the relationships between the processes. For example, despite the large amount of documentation, there was still a lack of clarity regarding relative responsibilities. The panel recommended that NEON management reexamine the number and content of all project documents to remove any redundancy.
- The panel was concerned at the staffing levels allocated for the operations phase – almost all staff members are retained from the construction phase which does not reflect the reduced change in workload. A thorough bottoms-up estimate was recommended for the operations budget.
- The panel perceived three strategies that the project had used to cover budget contingencies – conservative estimate on some individual items, management reserve,

[15] Text extracted verbatim from the *Preliminary Design Review Report.*

and a formal contingency. The concern was that some areas of contingency may be included in all three areas, and in some areas, this contingency was not explicit. The panel recommended that the budget be reviewed by FDR in order to reduce the layered approach to budget contingency.

- The project-wide acquisition strategy and plan was sufficient for the proposed design implementation and construction effort. The NEON procurement/contracts team had adopted well established policies and procedures that are consistent with government and industry best practice.
- The project management activities around human resources were on track. The NEON team provided an overview of its policies as well as progress on implementing diversity in the workforce. However, the panel did note that workers compensation management was a significant organizational risk. The coordination of the program was shared by several NEON entities including HR, EHS, and Finance. The panel recommended that the administration of the program be transferred to EHS with a dedicated FTE.
- There was a concern that the specific tasks for the transition between construction and operation felt nebulous as there was no single document describing the plan. The panel recommended a flowchart that described the *Domain Commissioning Process* to include key acceptance points by Operations, QA, and the Science Community.

**NEON Final** Design **Review:**[16]

NSF convened a panel in November 2009 "to formally examine the NEON engineering design, budget, schedule and PEP and to advise NSF on the sufficiency of the FDR and make recommendations regarding any areas where insufficiencies are identified. The panel conducted an expert assessment of project management through this stage of development as well as the plans for construction, commissioning and eventual operation of the network." The panel's observations and comments included:

- The NEON management organizational structure is impressive with excellent staff and project management/control systems in place, giving the panel a high level of confidence that NEON was ready to start construction.
- The panel noted that the project was ready to receive construction funds but stressed that bridge funding was essential to completing all goals prior to construction. In particular, the proposed total project construction cost was credibly defined, accounted for all elements of cost, was based on reasonable assumptions and was adequate to complete the NEON project.
- The panel agreed that it was reasonable to expect the NEON project to be implemented on schedule based on a review of the overall project schedule and the schedules for the subcomponents. However, the risk-based contingency for schedule delays and economic

[16] Text extracted verbatim from the *Final Design Review Report.*

volatility should be increased to ensure that there was adequate funding to deliver the entire proposed scope.

- NEON's plans from FDR are well documented and robust, and are sufficient to bring them to the construction phase. The project management processes were fully defined and mostly developed, though some protocols called for in the plans were still in progress.
- The processes for transitioning from construction to operations needed to be clarified. In particular, the positions, roles and responsibilities of staff moving from construction to operations activities were unclear.
- Although the preliminary operations plan was a good step in guiding NSF planning in incorporating operations costs into future budget requests, it needed further development.
- Due to the current NSF approval thresholds on subcontracts could create a bottleneck for the project, and result in schedule delays. The panel suggested that NEON reach closure with NSF on the strategy of using an *Acquisition Plan* as the vehicle for securing approval of multiple contracts.
- While the cyberinfrastructure team did an excellent job of translating NEON scientific requirements into a coherent plan for development of a cyberinfrastructure capable of storing sensor measurements, managing NEON assets, and preserving NEON data for long term access, the panel was concerned that the fact that the team selected high-end products that nominally met requirements continued to pull focus away from a detailed assessment of the configuration and integration tasks that will be required to realize their functionality in practice.

**NEON, Inc. Procurement and Subaward Review:**[17]

NSF conducted a review of NEON in February 2009 to "review and assess activities related to the procurement of supplies and other expendable property, equipment and other services with Federal funds." The review was requested by NEON, Inc. as it sought to increase its NSF approval threshold for large procurements and subawards from $100K to $250K. The reviewer focused on whether NEON, Inc. had "a purchasing system that includes prescribed written policies and procedures, ensures that procurements are conducted competitively, and maintains files or detailed records documenting the basis of all procurements and purchases." The reviewer found that NEON, Inc.'s *Procurement Manual* contained all appropriate flowdown provisions for contracts and was in compliance with both OMB Circulars and NSF Policies. Eight procurement files were reviewed and were generally found to be in compliance with the *Procurement Manual*. The only exception was a file that was missing the sole-source justification form and explanation for a large procurement. However, NEON, Inc. explained that this document was maintained in a separate file due to the importance of the procurement. The

[17] Text extracted verbatim from the *NEON, Inc. Procurement and Subaward Review Report.*

reviewer recommended that NSF amend the cooperative agreement to increase the threshold to $250K.

**NSF Office of Inspector General (OIG) Audit:**[18]
No reviews/records identified during BSR team research.

**NSF Award Monitoring and Business Assistance Program (AMBAP) Desk Review:**[19]
No reviews/records identified during BSR team research.

**NSF Property and Equipment Inventory:**[20]
No reviews/records identified during BSR team research.

**McBride, Locke & Associates Federal Financial Reports (FFR)/Federal Cash Transactions Review (FCTR):**[21]
No reviews/records identified during BSR team research.

*Other External Audits/Reviews*

**NEON Indirect Cost Review Report, March 2010:**[22]
The review was requested by the NEON Chief Operating Officer and Project Director. The charge of the panel was to assess the maturity of the organizational structure, review the current budget estimates and provide feedback to the COO regarding the validity of indirect costs. The panel was generally impressed with NEON's budgets, policies and procedures. It was suggested that NEON re-examine the approved future staffing plan, fringe benefits and legal, audit and insurance costs.

**NEON, Inc. Financial Statement and FY 2010 A-133 Audit:**
Anton Collins Mitchell, LLP conducted an audit of NEON, Inc.'s consolidated financial statements for the year ended September 30, 2009, and assessed NEON, Inc.'s compliance with requirements of Office of Management and Budget (OMB) Circular A-133 for the year ended September 30, 2009. The Audit examined Internal Control over financial reporting and major programs as well as compliance. The Audit reported no findings.

[18] BSR Team research of the NSF OIG website (www.nsf.gov/oig/auditpubs.jsp) as of 8/23/2011.
[19] Confirmation from NSF DIAS AMBAP contact *via* email 8/23/2011.
[20] Confirmation from NSF DAS Property contact *via* email 11/19/2010.
[21] Confirmation from NSF DFM FFR Testing contact *via* email 8/23/2011.
[22] This review was provided to the NSF BSR team on 10/20/2011. Because it was not available for inclusion in the desk and site review activities and evaluation by the BSR SMEs, the results were not considered in the assessment. It is listed here to provide a complete listing of previous reviews and audits.

**NEON, Inc. Financial Statement and FY 2009 A-133 Audit:**

Anton Collins Mitchell, LLP conducted an audit of NEON, Inc.'s consolidated financial statements for the years ended September 30, 2009, and assessed NEON, Inc.'s compliance with requirements of OMB Circular A-133 for the years ended September 30, 2009 and 2008. The Audit examined Internal Control over financial reporting and major programs as well as compliance. The Audit reported no findings.

**NEON, Inc. Financial Statement and FY 2008 A-133 Audit:**[23]

Watkins, Meegan, Drury & Company, L.L.C. conducted an audit of NEON, Inc.'s consolidated financial statements for the year ended September 30, 2008, and assessed NEON, Inc.'s compliance with requirements of Office of Management and Budget (OMB) Circular A-133 for the year ended September 30, 2008. The Audit examined Internal Control over financial reporting and major programs as well as compliance. The Audit reported several findings, some of which are listed below:

- Employee timesheets were not submitted in a timely manner.
- Lack of segregation of duties over the bank reconciliation and review process.
- Seven instances of drawdowns in excess of Federal expenditures were noted for the first three quarters.
- No formalized accounting policies for subrecipient monitoring.
- Internal control processes such as reviews of general journal entries, payroll reports, and financial reports were taking place, but were not always documented.

NEON management acknowledged the findings and outlined various measures it had taken or would take to address them. On November 17, 2010, NSF in a letter to NEON, Inc. stated that the responses appeared to address the auditor's findings but that NSF would like to verify that written policies and procedures had been developed to address the deficiencies.



[23] Text extracted verbatim

### 3.0 REVIEW STRATEGY

The outcome of broad scoping activities resulted in overarching guidance for the BSR.

While the team focused primarily on the business systems supporting NEON's construction activities, due to the planned overlap in activities between the two phases[24] issues related to the awardee's plans for transition to operations and maintenance were also explored. Previous awards provided for early planning related to NEON were not included because the business systems at that time were considered sufficiently mature or not relevant to the current organization[25]. Additionally, individual investigator awards which provide funding for technical research related to the use of the NEON Facility were also excluded[26]. These were not considered directly relevant to the BSR and administrative business systems associated with construction and/or operations of the Facility. All active cooperative agreements (CAs), including the one for construction and management support, were considered relevant for examination[27,28].

A site visit was conducted at NEON Inc.'s Headquarters and included a tour of its Calibration/Validation and Sample Audit Laboratory. As noted previously, the majority of the staff providing administrative business support is currently located at Headquarters. With little construction activities elsewhere, the team also visited the Sterling prototype site which provided opportunities to examine logistics planning and aspects related to interactions with administrative business support systems.

In assessing the CFAs to be included in the BSR, it was determined the evidence was insufficient to justify the full exclusion of any CFA. As a result, all eight areas were included in the review, but adjustments were made to the methods or review and/or to the CFA-specific principles and practices of select CFAs. Details related to the principles and practices included in each CFA review plan were determined through additional scoping and the results are addressed in the Observations Section of this report. The results of these scoping adjustments are summarized in Table 2.

[24] At the time of publication of this report, construction of NEON is scheduled for completion in 2016.
[25] *e.g.*, DBI-0436285, DBI-0715408, DBI-0653461
[26] *e.g.*, 0223530, 0231798
[27]DBI-0735106, EF-0752017, EF-0808232, EF-0940226
[28] It was confirmed that the same administrative business systems used to support all NEON Inc. CAs and the ARRA-funded EF-0940226 award. The awardee's performance under EF-0940226 was excluded from the BSR as it was reviewed as part of a separate BIO Programmatic-led review.

**Table 2. Methods of Review and Deviations from the BSR Guide**

| Core Functional Area | Methods | | Deviation |
|---|---|---|---|
| | Desk Review | Site Visit | |
| General Management | ✓ | ✓ | Excluded a review of strategic planning, autonomous committees, records management, cybersecurity and physical security. |
| Award Management | ✓ | ✓ | None |
| Budget and Planning | ✓ | ✓ | None |
| Financial Management | ✓ | ✓ | None |
| Financial Reporting | ✓ | ✓ | None |
| Human Resources | ✓ | × | Included a limited review of discrimination and drug-free workplace with a primary focus on self-certification process. Also included a review of compensation strategy. |
| Procurement | ✓ | ✓ | None |
| Property and Equipment | ✓ | ✓ | None |
| ✓ denotes activity was conducted; × denotes activity was not conducted by SME | | | |

## 4.0 INTRODUCTION OF CORE FUNCTIONAL AREAS REVIEWED

As previously noted, the BSR reviews administrative business systems in eight CFAs. Each system is assessed against a set of Principles, outlined in the BSR Guide, which describe the general characteristics of sound management in a particular CFA. The discussions within the Observation sections of this report follow the CFAs and Principles as ordered in the outline below.

**CFA 1: General Management (GM)**

*Principle 1:* A management structure should be in place to carry out the general management responsibilities for the Facility.
*Principle 2:* A strategic planning system should be in place to set long-term goals as well as systems to measure, evaluate, and improve overall performance.
*Principle 3:* The Awardee should have a formal system for audit and oversight to ensure compliance with the award terms and conditions.
*Principle 4:* Policies and procedures should be in place to address ethical standards and regulatory compliance.
*Principle 5:* Autonomous committees should be in place to provide advice, guidance and oversight for the Facility.
*Principle 6:* Systems should be in place for the management of records.
*Principle 7:* The Awardee should have systems in place to address other general management issues.

**CFA 2: Award Management (AM)**

*Principle 1:* A management structure should be in place to carry out the award management responsibilities for the Facility.
*Principle 2:* The Awardee should have a system in place to ensure compliance with the terms and conditions of the award.
*Principle 3:* The Awardee should have policies and procedures in place for monitoring the performance of subrecipients.

**CFA 3: Budget and Planning (BP)**

*Principle 1:* A management structure should be in place to carry out the budget planning functions for the Facility.
*Principle 2:* There is a systematic process for formulating operation budgets for the large Facility.
*Principle 3:* An established process ensures that budgets are adjusted in response to changes affecting the Facility.
*Principle 4:* Processes are in place to address budgetary uncertainty.
*Principle 5:* The Awardee should have a system in place to ensure compliance with the terms, conditions and specifications of the award relevant to budget and planning.

**CFA 4: Financial Management (FM)**

*Principle 1:* A management structure should be in place to carry out the functions of financial management.

*Principle 2:* The Awardee should have an adequate accounting system that is compliant with applicable generally accepted cost principles (2 CFR 220, 2 CFR 230, FAR Part 31), administrative requirements (2 CFR 215), and internal policies and procedures.

*Principle 3:* Systems should be in place to ensure that proper source supporting documentation is maintained for costs incurred under the NSF award.

*Principle 4:* The Awardee should have a system in place to ensure compliance with the terms, conditions and specifications of the award relevant to financial management.

**CFA 5: Financial Reporting (FR)**

*Principle 1:* A management structure should be in place to carry out the financial reporting functions for the Facility.

*Principle 2:* The Awardee should have adequate controls for preparing accurate and timely cash requests and Federal Financial Reports (FFR).

*Principle 3:* The Awardee should have an accurate cash management process.

*Principle 4:* The organization should have a system in place for accurate and complete financial reporting through the FFR.

*Principle 5:* The Awardee should have adequate controls in place for access to the FastLane Financial Functions.

*Principle 6:* The Awardee should have a system in place to ensure compliance with the terms, conditions and specifications of the award for financial reporting.

**CFA 6: Human Resources (HR)**

*Principle 1:* A management structure should be in place to carry out the human resources functions for the Facility.

*Principle 2:* The Awardee should have mechanisms in place to ensure that no person is discriminated against based on race, color, national origin, sex or handicap.

*Principle 3:* The Awardee should have mechanisms in place to maintain a drug-free workplace.

*Principle 4:* The Awardee should have a human capital or workforce plan in place to ensure its human resources are aligned to carry out its mission.

*Principle 5:* The Awardee has policies and practices in place to provide safeguards to ensure that the institution complies with laws and regulations regarding recruitment, hiring and employment.

**CFA 7: Procurement (PR)**

*Principle 1:* A management structure should be in place to carry out the procurement functions of the Facility.

*Principle 2:* The Awardee should have adequate controls for procurement actions.

*Principle 3:* The Awardee shall establish written procurement procedures in accordance with 2 CFR 215.44 "Procurement Procedures."

*Principle 4:* The Awardee should ensure that procurements are cost effective and have been competitively selected.

*Principle 5:* The Awardee should actively seek diverse resources for procuring and acquiring goods and services.

*Principle 6:* The Awardee should a system in place for contract administration to ensure contractor compliance with the terms, conditions and specifications of the contract and to ensure adequate and timely follow-up of all purchases.

*Principle 7:* Appropriate flow-down provisions should be included in all procurements.

*Principle 8:* The Awardee should have policies and procedures in place to address the specific requirements of the terms and conditions of the NSF cooperative agreement related to procurement and subawards.

**CFA 6: Property and Equipment (PE)**

*Principle 1:* A management structure should be in place to carry out the property and equipment functions of the Facility.

*Principle 2:* The Awardee should have policies and procedures that comply with Federal regulations for acquisition of property and equipment.

*Principle 3:* The Awardee should have policies and procedures that comply with Federal regulations and requirements for the use and disposition of property.

*Principle 4:* The Awardee should have a system in place for securing and maintaining equipment purchased with Federal funds.

*Principle 5:* The Awardee's inventory and recordkeeping practices should be in compliance with Federal requirements and should be maintained accurately in a property management or inventory system.

*Principle 6:* The Awardee should have a system in place to ensure compliance with the terms, conditions and specifications of the award relevant to property management.

### 5.0 RESULTS

The business systems were evaluated according to the BSR Guide. This section summarizes the results of the NEON, Inc. BSR for all of the CFAs. The results are categorized as Areas of Concern, Areas for Improvement and Best Practices. Areas of Concern identify the areas that show business system deficiencies or noncompliance with Federal requirements. Addressing these areas is mandatory. The Areas for Improvement outline those actions that the reviewers believe, based on their experience and knowledge of applicable best practices, would improve the business systems in a particular CFA. Addressing the Areas for Improvement is optional.[29] Best Practices identify the business practices, procedures and policies that exceed the expectations for a proficient business system.

The details of the observations supporting the results are outlined in Core Functional Area Reviews.[30]

Areas of Concern include:

FR-1: Develop written procedures for minimizing the time between transfer of funds from NSF and disbursement by NEON (*i.e.*, 3-4 days). In accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Payment[31] subsection, organizations operating on an advance basis must have written procedures to minimize the time between receipt of funds from federal agencies and payments to vendors/payroll. NEON needs to strengthen existing procedures to address Federal regulations.

FR-2: Develop policy guidance to identify, record, and report program income in accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Program Income subsection. Recipient organizations are required to account for program income related to projects supported with federal funds. This process should be documented in the NEON policies and followed when reporting quarterly on the FFR.



[29] The NSF PM may require that select/all areas for improvement be addressed as part of the follow-up and monitoring process.
[30] Section 6.0 of this report
[31] 2 CFR 215.22

PE-1: A physical inventory should be conducted in accordance with the provisions of t the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Equipment.[32] The inventory should be conducted at least once every two years, with verification of existence and location of the equipment as well as information on current condition and utilization. Inventory information should be reconciled with the accounting records. The *PPM* does not go into detail on the procedures or processes that should be followed for the reconciliation process nor is there any emphasis in the manual on the need to ensure that the inventory is updated promptly. This should be addressed.

<u>Areas for Improvement</u> include:

GM-1: Existing organizational charts and other materials used to depict/describe the organizational structure supporting NEON should be clarified and address the various concerns related to clarity.

GM-2: Alternate organizational structures should be explored, with special attention to the overall size of management and strategies used for integration across groups.

GM-3: NEON, Inc. should revisit its plans for implementing an audit and oversight activity and accelerate the standup date. While the function-specific activities and training could continue to be managed in a distributed fashion, a consistent organizational-wide framework to govern operational protocols should be coordinated and managed through a single group. This framework should include roles, responsibilities for ensuring continuous compliance, and corresponding processes with timelines.

GM-4: Develop a process for individuals to acknowledge NEON, Inc.'s policies on ethics and standards of conduct and COI. It should also explain how instances of noncompliance are tracked and resolved and communicated to other affected groups. The *PPM* should be expanded to document these details, and staff should be trained.

AM-1: Update NEON, Inc., policies, procedures, NEON Responsibility Matrix, and position descriptions to ensure segregation of duties for award management. In particular the procedures ought to specify that one individual or group is responsible for compliance and a different individual or group is responsible for monitoring compliance.

AM-2: Implement updates to policies, procedures and PD and ensure they align with the changes to segregate duties. As an immediate first step the SRO's AM responsibilities should be immediately transferred from the PI to the SRO.

AM-3: Issue the individuals assigned to AM responsibilities to a FastLane user account and/or other authorizations and permissions to accomplish AM functions.

[32] 2 CFR 215.34 (f)(3)

AM-4: Revisit and strengthen the current approach to assigning AM responsibilities such as the monitoring of award terms and conditions. The written procedures ought to implement a strategic approach to communication of award terms and conditions, amendments to those terms and conditions, and roles and responsibilities for compliance that includes all organizational stakeholders.

AM-5: Ensure that the written procedures practices align with associated SRO's responsibilities.

BP-1: Finance and PMCS should immediately examine alternative ways to account for labor actuals that would allow a more standard way of reporting EV. The NSF requires clear, concise EV reports that accurately reflect performance.

BP-2: The connection and communication between the Finance group and the PMCS group should be strengthened. NEON, Inc. should investigate formal structures that would facilitate routine interaction between these two groups. One approach may be to hire a business manager to serve as a technical liaison between the two groups. In the interim, these two groups should set routine meetings to collectively discuss issues related to budget data and revise joint solutions.

BP-3: An organization-wide approach to compliance monitoring terms and conditions ought to be developed. If the procedures require functional groups such as PMCS, to be involved with monitoring then training should be provided to ensure that staff understand the associated expectations and responsibilities.

BP-4: The year-end budget closeout process needs to be more fully documented. Existing documentation ought to more clearly specify how and when variances, for example, are reconciled between the NEON, Inc. accounting system and COBRA.

FM-1: Ensure that materials (organizational charts and references in *PDs, PPM*, and the *Accounting Manual*) are consistent and aligned with roles and responsibilities of FM staff. Titles, terms, and PD duties should reflect current operating positions. The *PPM* and the *Accounting Manual* should be updated to ensure that references to the Finance Department and job titles of staff are consistently referred to throughout.

FM-2: Priority should be given to completing the *PPM* and the audits sections of the *Accounting Manual*. Internal audit control mechanisms should be developed documented and implemented checking basic internal control processes on a routine basis. Further basic protocols for handling external auditors should be developed and implemented immediately with all audits.

FM-3: Policies, procedures and practices should be revised to ensure CFO participation and concurrence in all financial representations for NEON, Inc. This will provide for necessary checks and balances to the process.

FM-4: The CFO should organize support documentation related to the development of the indirect cost rate identified in the cost proposal and include a narrative that clearly explains how the rate was developed. This should also include a justification to support the indirect cost recovery in the construction cost proposal should be documented. Further, all appropriate functional representatives should participate in discussions with the DCAA auditors.

FM-5: Develop a policy and practice to address allowability of Employee Morale Costs. Written policies and procedures on employee morale should be included in the *PPM* and address the responsibilities of the new Employee's Activity (EA) group. Clear distinctions should be made between those EA sponsored activities that are considered allowable and those considered unallowable. All expenses associated with these types of costs that have been incurred should be reviewed for allowability, allocability and reasonableness. Charges that would be considered unallowable in context of the new policy should be removed from the NSF award. Ensure that the policy fully complies with the Cost Principles for Non-Profit Organizations[33] and Employee Morale, Health and Welfare Costs[34] and Entertainment Costs.[35]

FM-6: Review written protocols pertaining to support documentation and ensure that proper justification for expenses is required. Training should be provided to review the protocols and alignment of associated practices.

FR-3: Roles and responsibilities for all financial reporting activities should be clearly identified in the *PPM* and the *Accounting Manual*. These descriptions should reconcile against each other and correspond to the job titles for the respective position descriptions.

FR-4: Procedures and detailed step-wise methodology used to develop cash requests and FFRs should be documented. These should include information on specify the source of information used to calculate the cash request amount and the FFR totals.

FR-5: FastLane procedures for assigning the FL users access and, in particular, the financial functions, should be developed and documented. Procedures should include delegated responsibilities in the absence of the CFO and address segregation of FastLane functions to ensure that conflicts of interest are avoided.

HR-1: NEON, Inc. should consider investigating other organizational structures for the improvement of HR operations. There may other organization arrangements that are more efficient and effective.



[33] 2 CFR 230
[34] 2 CFR 230 Appendix B.13
[35] 2 CFR 230 Appendix B.14

HR-2: NEON, Inc. should ensure that it addresses outstanding NSF-stated concerns and expectations related to the development of a succession plan.

HR-3: HR should outline a strategy to deliver training courses on high risk issues to all NEON, Inc. staff with the initial focus on required job functions and compliance concerns such as safety, travel and expense reporting, and procurement policy.

HR-4: NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with discrimination against persons based on race, color, national origin, sex, or handicap. Current practices are not structured and have resulted in select requirements not being addressed.

HR-5: NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with drug-free policies.

HR-6: While NEON, Inc. are planning strategies to manage their workforce, these are mostly short-term an informal in practice. More structured short and long-term workforce planning should be developed and written. It should include a consistent approach to aligning the workforce with NEON's mission and objectives.

HR-7: The staffing strategy for operations has been delayed due to changes in funding. NEON, Inc. should develop a model for more easily determining staffing levels under different funding scenarios. This would enable HR to better plan.

HR-8: The NEON, Inc. succession plan for C-level positions should be completed and submitted to NSF as expected.

HR-9: The Performance Assessment Program should be completed, documented and executed as soon as possible, within the next six months. This is especially important given the growth in staff during construction and need to maintain and retention the organization.

HR-10: NEON, Inc.'s compensation analysis should be reviewed to include market data from only not-for-profit organizations (*e.g.*, academic institutions, Federal and State Governments, and non-profits). NEON, Inc. should work with NSF Program to review the results and determine the appropriate next steps if excluding the "for profit" comparisons results in significant differences to salary ranges.

PR-1: P&C should develop a tracking process to ensure proper checks and balances are maintained in practice as outlined in the *PPM* and PCGM.

PR-2: Include all individuals with delegated authority to enter into lease agreements into the Approval Authority matrix.

PR-3: Conduct annual training sessions for P&C staff to reiterate the Standards of Conduct policy and the Conflict of Interest requirements.

PR-4: Given the large amount of construction planned during the near future and the wealth of minority-owned firms and small business in the construction trades, NEON should revisit their five year goal and develop a plan to actively seek under-representative participation.

PR-5: Develop desktop procedures for the review and approval process for all subcontract invoices to ensure that the contracted work effort is consistent with the criteria established in the contractual agreements.

PR-6: Include all required flowdown provisions that are identified in the *PPM* and *PGCM*, including the termination for convenience clause, as part of the Federal Regulatory Flowdown References[36] section in the *PCGM*.

PR-7: Ensure that practices and procedures outlined in the *PPM* and *PGCM* for subaward monitoring activities are followed. NEON has had limited opportunity to put these policies and procedures into practice but are encouraged to ensure that these will be followed. For example, P&C should develop a form to collect information from subrecipients' A-133s.

PE-2: Internal operating procedures and PDs should accurately reflect the roles of staff performing the PE monitoring roles. Roles and responsibilities of property management staff should be clearly stated in the *PPM* consistent with their position descriptions. Roles of the Logistics Manager, the Warehouse Supervisor, Property Specialist, and Domain Property Administrators with regard to inventory control and data management should be specified in the *PPM*.

PE-3: Current operating procedures should be identified. The *PPM* should provide policies and procedures for staff on current operating practices for property management to ensure that appropriate practices are followed.

PE-4: Develop a structured in-house training program, including refresher training, for property custodians and all staff involved in the various lifecycle stages of property management. The program should include a focus on their responsibilities for personal property management, usage, and disposal.

PE-5: Develop a process to ensure that all proposed equipment purchases are screened against the current inventory list to ensure that the proposed asset is not readily available within the institution prior to purchasing it. Acknowledgement (*i.e.*, check box) that the screening took place should be included in the PR statement.



[36] PCGM Section J

PE-6: Ensure that the property management system has the functionality to record warranty information and produce the required maintenance reports. This is an important component for management of property, particularly at remote sites, and NEON is encouraged to proceed quickly with this functionality implementation.

PE-7: Revise the Equipment disposition process in the *PPM*. Several items should be addressed: identify the personnel who are responsible for contacting an agency property manager when an item of GOE is considered excess, specify how income is treated as a result of a disposition or salvage, and explain the methods and processes for determining the conditions under which equipment could be transferred, sold, or loaned to another institution.

PE-8: The Equipment Inventory Form should be revised. Guidance instructions should be developed on completing the form. The form indicates that the departments should submit completed forms to "A&FS Equipment Management" but this entity is not reflected on any of the organizational charts.

PE-9: Provide more detailed Instructions to staff for completing and submitting forms identified in Appendices of the *PPM* to ensure that the forms are completed correctly and are forwarded to the appropriate office for review (Appendix B - Capital Asset Disposal Forms, Capital Asset Donation/Scrap Forms, Capital Asset Disappearance/Theft forms.

PE-10: Specific authority levels for the property management database should be identified and documented. Clearly identify staff and authority levels to access, update, and change records in the Maximo property asset module to ensure that there is integrity of data.

PE-11: Document the step-by- step procedures used to tag equipment and record the information into the Maximo module. It is unclear from the review of the Property and Equipment Management Overview of the PPM, how equipment is tagged, either at the warehouse or at the remote site. NEON, Inc. should ensure that all capital assets are recorded timely and accurately in the system. The procedures should include a standardized location to tag equipment to facilitate the inventory process.

PE-12: Consider utilizing GSAXcess to acquire excess government property which might be useful as the project moves into the construction phase. Participation in the program will conserve supply and equipment funds while supporting reutilization.

PE-13: Consider developing policies and procedures to document expenditures for equipment charged to more than one funding source. During discussion, the CFO indicated that these procedures would be developed if the need arose to do so in the future.

Best Practices include: None identified.

# 6.0 CORE FUNCTIONAL AREA REVIEWS

## 6.1 GENERAL MANAGEMENT

### 6.1.1 Scope

This portion of the review included an assessment of the systems, policies and procedures in place related to general management that supports the key administrative business processes of the Awardee. The review evaluated items such as the organizational structure used to manage the Facility, the strategic planning process, performance measurement practices, internal controls and compliance assessments, regulatory and ethical compliance procedures, and other management issues. The review examined the governance of the Facility, management reporting and records retention, information technology (IT) systems, cybersecurity requirements, and communication and safety issues. The review also assessed whether the systems are consistent with NSF expectations and are compliant with the terms and conditions of the NSF award.

The review was refined. The principles and practices related to strategic planning, autonomous committees for advice, guidance and oversight, records management and other general management issues (*e.g.*, cybersecurity and building security) were excluded to avoid duplication of effort.[37] These have been reviewed in programmatic reviews.[38]

It was determined that both a desk review and a site visit were necessary.

### 6.1.2 Sources and Methods

- Awardee Participants: T. Beasley, T. Sheldon

The desk review involved assessing the information provided by the Awardee and *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during this review.



[37] Principals 2, 5, 6, and 7

[38] As noted in the Previous Audits and Reviews Section of this report.

### 6.1.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE GENERAL MANAGEMENT RESPONSIBILITIES FOR THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the general management functions supporting the Facility.

The key stakeholders providing general management support to NEON, includes a NEON Board of Directors, a Chief Executive Officer (CEO), a series of Chief/senior level (C-level) positions including Chief Operating Officer (COO), Chief Financial Officer (CFO), Chief Human Resources Officer (CHRO), NEON Project Manager and NEON Principle Investigator (PI). Other senior-level positions are on the staff, such as the Chief of Education and Public Engagement but their responsibilities specific to general management support is limited. The *NEON, Inc. Organizational Charts*[39] and its sub charts outline this organizational structure along with relative reporting lines and lines of authority. However, select aspects of the information and structural arrangement is ambiguous and possibly not optimal. Several examples follow: (1) the structure, with 8 Chiefs and 10 Directors, is flat and top heavy. There may be other organizational arrangements that are more efficient and effective. These should be explored; (2) The NEON Board of Directors is shown at the top of the organizational chart but its authority and role is unclear (*i.e.*, are they managing, advising, directing or all three?); (3) The representation of the management hierarchy of the C-level positions suggests that the positions operate at the same level and with equal levels of authority. As observed during the site visit interactions, the C-level positions and associated authorities in practice do not appear to be equal; (4) the relationships between the NEON, Inc. positions and NEON project positions are unclear. Many individuals are listed in multiple places with more than one title and (5) there does not appear to be a formal entity responsible for discussing technical and interface matters (*i.e.*, Technical Board). While these examples may not present a problem in current day-to-day operations, responsibilities and structures should be clarified and documented in a project management plan and other relevant documentation to mitigate potential future problems.

**PRACTICE 1.2.** Roles and duties of staff members responsible for general management of the Facility should be clearly assigned and defined.

With the exception of the NEON Board of Directors, the roles and responsibilities of the staff are captured primarily in job descriptions. The *NEON, Inc. Board of Directors Manual*[40] includes the Bylaws of NEON, Inc. and these outline broad responsibilities associated with the governance. Whereas more details on the individual's positions are outlined in procedural documentation such as the *NEON, Inc. PPM* and *NEON, Inc. Salary Manual.*[41]

[39] Dated 06/29/2011
[40] Version 1.4
[41] Last updated 07/15/11

The organizational charts, PDs and procedural documentation are not always clear in defining or differentiating all aspects of staff roles and responsibilities. This may be one reason the day-to-day business practices do not always align. Staff members may not always be clear in expectations.

**PRACTICE 1.3.** The Awardee should have training and development processes and practices to address existing or anticipated skill or knowledge gaps.

Currently NEON, Inc. does not have a strategic plan for staff training. However, they plan to coordinate training and development on an organization-wide basis and with the recent hiring of their Manager of Learning and Development they should be well-positioned to implement. In the interim period the C-level, including Directors define and oversee training needs for their respective groups.[42]

In examining the to-date training records for C-level staff and in particular those responsible for GM support type, it appears that staff members are pursuing training though it has been minimal and very narrow in scope. The NEON, Inc. training strategy ought to include training requirements for all staff including those providing broad GM support. The training should ensure that staff members are prepared to fulfill their roles and responsibilities as senior managers.

**PRINCIPLE 2. A STRATEGIC PLANNING SYSTEM SHOULD BE IN PLACE TO SET LONG-TERM GOALS, AS WELL AS SYSTEMS TO MEASURE, EVALUATE, AND IMPROVE OVERALL PERFORMANCE.**

This principle and associated practices were excluded from the review.

**PRACTICE 2.1.** A system should be in place for long-term planning for the large Facility.

This practice was excluded from the review.

**PRACTICE 2.2.** The Awardee should have documented procedures to measure the performance of various business systems that support the large Facility.

This practice was excluded from the review.



[42] The term group and department are used interchangeably.

## PRINCIPLE 3. THE AWARDEE SHOULD HAVE A FORMAL SYSTEM FOR AUDIT AND OVERSIGHT TO ENSURE COMPLIANCE WITH THE AWARD TERMS AND CONDITIONS.

**PRACTICE 3.1.** The Awardee should have a program in place to ensure compliance with regulatory issues.

The *NEON, Inc. Policies and Procedures Manual (PPM)* is the primary mechanism by which policies and procedures related to compliance are communicated to staff. Across each of the CFAs and as discussed in the respective subsequent sections, CFA-specific procedural information exists and outlines additional processes that ensure compliant practices (*e.g., PPM, Employee Handbook* etc.). However there is no centralized or coordinated process for identifying instances where staff, policies and/or procedures are non-compliant (*e.g.,* staff certifications). Further there are no procedures to explain how they will be tracked and addressed and in a timely fashion. At the current time most compliance related matters are identified by and managed differently by each of the functional area groups (*e.g.,* Human Resource Department address HR matters).

**PRACTICE 3.2.** The Awardee should have written policies and procedures to address the conduct of the external independent audit and the internal audit responsibilities.

The Conduct of the External Audit[43] and Internal Audit Program[44] sections of the *PPM* provide guidance regarding the selection of an independent external audit firm, the execution of the annual A-133 Single Audit, and to outline the scope, organization, and planning of internal audit activities. The descriptions, as currently presented, address general points including coordination, routine scheduling and independence but they do not address critical areas or process related to noncompliance (*e.g.,* notifying the NSF Inspector General where there is credible evidence of a false claim or misconduct involving use of Federal funds). Further the procedures do not provide explicit details on process for those that will be responsible for carrying out the functions. These will be needed to ensure consistency and completeness. Finally the proposed date for implementation is FY-12 as noted in the *PPM* and *NEON, Inc. Mid-Term Business Plan.* This timeline for standup is inadequate and consideration should be given to a phased approach that recognizes the workload while still enabling the organization to begin sooner.



[43] PPM Section 3.9.3
[44] PPM Section 3.9.4

**PRINCIPLE 4. POLICIES AND PROCEDURES SHOULD BE IN PLACE TO ADDRESS ETHICAL STANDARDS AND REGULATORY COMPLIANCE.**

**PRACTICE 4.1.** The Awardee should have a system in place to comply with ethical standards of conduct.

The *NEON, Inc. PPM* includes an Ethics and Standards of Conduct section.[45] As written the purpose of this section "...to define the standards expected of employees, visitors, partners and representatives..." The Manual covers the topics of proprietary information, gifts, gratuities and business courtesies, accepting business courtesies, meals, refreshments and entertainment, gifts, accurate books and records and disclosure, media inquiries and accountability. As stated in the *PPM*, staff, visitors and partners are expected to be knowledgeable of and adhere to the Organization's standards of ethics and conduct. However, in practice NEON, Inc. does not maintain a formal process for staff to acknowledge receipt of the standards of conduct policies and procedures.

**PRACTICE 4.2.** The Awardee should have Conflict of Interest (COI) policies and procedures.

The Conflict of Interest section[46] of the *NEON, Inc. PPM*, describes the organization's COI policy and states, "The purpose of the NEON, Inc. policy on COI is to protect NEON, Inc. from transactions, arrangements or relationships of any Interested Person (defined below) that would constitute a COI. The COI policy is preventative in its intent to protect the objectivity and credibility of NEON, Inc. and its tax-exempt status."

As currently presented the policy is a good start, providing definitions and expectations for use "Research Activities" and "Use of NEON Assets" and basic notes on staff roles, tracking and violations. For example, it states that "All employees must complete an Acknowledgement and Disclosure upon hire and update this acknowledgement annually. NEON employees must immediately notify the CEO of any matters that may result in real or perceived conflicts of interest by submitting a Conflict of Interest Statement."

Additional details on all issues must be fleshed-out and outlined in writing. If HR is responsible for collecting the COI documentation, this should be incorporated into the *PPM* along with the process for notifying the CEO (*e.g.*, Should it be done in writing or orally? What information should be provided to the CEO?).

**PRINCIPLE 5. AUTONOMOUS COMMITTEES SHOULD BE IN PLACE TO PROVIDE ADVICE, GUIDANCE, AND OVERSIGHT FOR THE FACILITY.**

This principle and associated practices were excluded from the review.

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[45] PPM Section 1.1.4

[46] PPM Section 1.1.3.

**PRACTICE 5.1.** Self-governing committees should be in place to provide guidance, direction and oversight for the Facility guidelines and direction for the progress of the Facility's mission and objectives and oversight of the Facility.

This practice was excluded from the review.

**PRINCIPLE 6. SYSTEMS SHOULD BE IN PLACE FOR THE MANAGEMENT OF RECORDS.**

This principle and associated practices were excluded from the review.

**PRACTICE 6.1.** Record retention policies and procedures should be in place and follow the requirements of CFR 215.53.

This practice was excluded from the review.

**PRINCIPLE 7. THE AWARDEE SHOULD HAVE SYSTEMS IN PLACE TO ADDRESS OTHER GENERAL MANAGEMENT ISSUES.**

This principle and associated practices were excluded from the review.

**PRACTICE 7.1.** Policies and procedures that support the large Facility should be in place to address cybersecurity and IT issues.

This practice was excluded from the review.

**PRACTICE 7.2.** The Awardee should have a system to assure the security of buildings, equipment, information systems, and personal safety.

This practice was excluded from the review.

### 6.1.4 Results

Areas of Concern: None identified.

Areas for Improvement include:

GM-1: Existing organizational charts and other materials used to depict/describe the organizational structure supporting NEON should be clarified and address the various concerns related to clarity.

GM-2: Alternate organizational structures should be explored, with special attention to the overall size of management and strategies used for integration across groups.

GM-3: NEON, Inc. should revisit its plans for implementing an audit and oversight activity and accelerate the standup date. While the function-specific activities and training could continue to be managed in a distributed fashion, a consistent organizational-wide framework to govern operational protocols should be coordinated and managed through a single group. This framework should include roles, responsibilities for ensuring continuous compliance, and corresponding processes with timelines.

GM-4: Develop a process for individuals to acknowledge NEON, Inc.'s policies on ethics and standards of conduct and COI. It should also explain how instances of noncompliance are tracked and resolved and communicated to other affected groups. The *PPM* should be expanded to document these details, and staff should be trained.

Best Practices: None identified.

## 6.2 AWARD MANAGEMENT

### 6.2.1 Scope

This portion of the review included an assessment of the award management administrative business systems supporting the large Facility and the organizational structure in place to support these functions. The review evaluated these systems to confirm that prescribed written policies and procedures are incorporated into the Facility's practices, internal controls are in place, and the systems are capable of supporting the Facility. The scope also encompassed an assessment of whether or not the systems of this core functional area are consistent with NSF expectations and are compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that both a desk review and a site visit were necessary.

### 6.2.2 Sources and Methods

- Awardee Participants: L. Anderson, T. Beasley, and T. Sheldon

The desk review involved assessing the information provided by the Awardee and the information obtained *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during the scope of this review.

### 6.2.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE AWARD MANAGEMENT RESPONSIBILITIES FOR THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the award management functions supporting the Facility.

The *NEON, Inc. Organizational Charts*[47], *NEON, Inc. Policies and Procedures Manual (PPM)* and *Key Personnel* document outlines a structure with designated positions and specified individuals responsible for award management (AM) support for NEON. As noted in the *PPM*, these positions include the PI who has primary responsibility for providing the AM support, the Director of Procurement and Contracts (P&C) who is designated as the sponsored research office (SRO) head and the CEO who has the final authority on the SRO activities.

In comparing the current organizational structure and activities with that outlined in the *PPM*, it was noted that the practices are not consistent with the published *PPM* policies and procedures. The majority of the AM responsibilities are being carried-out by the NEON PI who

[47] Dated 6/29/2011

also holds multiple roles as COO, NEON Project Manager (PM), and SRO. This approach to structuring support for AM is problematic because it results in no clear separation of duties. Further, with such a breadth and significant number of responsibilities this has provided limited attention to SRO duties and has resulted in select tasks not arriving at completion. NEON, Inc. acknowledged that its current practice of the PI carrying-out select AM responsibilities has resulted in some actions being taken without a "second set of eyes," which would allow for cross-check or approval (*e.g.*, submitting requests to NSF and approving).

**PRACTICE 1.2.** Roles and duties of staff members responsible for award management of the Facility awards should be clearly assigned and defined.

The roles and responsibilities for staff providing AM support are outlined in the NEON, Inc.'s *PPM* and staff position descriptions (PD). The *PPM* describes the PI's role as "...primary responsibility for the scientific integrity, fiscal and administrative management of the award." More specifically, in the Award Management section[48] of *PPM*, it states that "award management activities for which the PI is primarily responsible include: award acceptance and communication; notification of key personnel changes; control management for award budget, scope, schedule, execution changes; monitoring programmatic research terms and conditions; monitoring financial terms and conditions; monitoring special terms and conditions; postdoctoral mentoring program compliance, ARRA management; and award sponsored-required, special, and programmatic ARRA reporting."

The Award Management section[49] of *PPM* states that the "SRO has primary responsibility for corporate FastLane management, coordination of awards and agreements, assessment of statutory and regulatory compliance, transfer issues and NSF website monitoring."

Within the corresponding PDs for the CEO, PI and Director of P&C there are limited references to AM support. The CEO's PD is very limited and states that the position "requires business acumen." While this could be expected because CEO does not have a significant role in executing the AM support functions, additional detail would be helpful to assist staff in understanding the individual's AM-specific role and responsibility. Similarly, the PI's PD is also limited with AM support responsibilities not formally described even though he has responsibility for award management. The Director of P&C's PD describes limited responsibilities for award management which include subaward monitoring, award budget/scope/schedule/execution changes, and monitoring financial terms and conditions.

Given the paucity of information in the PDs and the multiple roles held by the PI the lines of authority and responsibility for AM support do not appear to have always been well

[48] PPM Section 4.2

[49] *Ibid*

understood by or always well-coordinated amongst the staff.[50] The *PPM* states that the "SRO will periodically review the PI roles and responsibilities for all awards, and may reassign them to other parties on a temporary or permanent basis." Discussions with NEON, Inc. note that management has decided to transition select AM roles and responsibilities from the PI to the SRO. Even though the PI has been working with the Director of P&C (*i.e.*, SRO) the transitioning of more responsibilities has been slow and not yet fully implemented, and this periodic review has not yet been undertaken formally. The limited progress on this transition is largely due to numerous workload demands on the PI but further demonstrates the importance of aligning AM support duties with the *PPM* and segregating the award management duties to other non-PI designated position. The current organizational structure under Accounting, Finance and Logistics provides flexibility and should enable them to absorb the SRO functions outlined in the *NEON Responsibility Matrix*.[51] Distribution of the AM functions to other stakeholders will facilitate the segregation of duties and ensure full compliance with award terms and conditions. The functions associated with the role of a SRO are critical for effective and compliant award management of the NEON project award.

Another example of an issue related to management of FastLane (FL) information is the responsibility of the SRO. *NEON, Inc. FastLane User Accounts and Permissions*[52] shows that the SRO does not have an account. During the BSR site visit it was confirmed that just recently and prior to the visit the SRO was provided with a FL account.

The ARRA-specific Activities section of the *PPM*[53] states that "Finance and Accounting (F&A) is responsible for the financial reporting requirements." Beyond the general technical and administrative reporting requirements, which are flowed down by NSF in the Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC), there are no additional technical and administrative reporting requirements on the ARRA awards. These are discussed within the Financial Reporting Section of this report. NEON, Inc. procedures for executing the programmatic reporting for ARRA requirements are addressed in the *PPM*.[54]

**PRACTICE 1.3.** The Awardee should ensure that award management staff members receive continuing educational opportunities to allow them to successfully manage Federal awards.

The NEON, Inc. Award Management Environment and Expectations section of the *PPM*[55] highlights a requirement for staff to have award management training. However, the type and frequency of the training are not currently defined. In examining the training list for the staff

[50] NEON, Inc. shared an email, dated May 21, 2011, which discussed a proposed meeting on the proposed NEON project T/Cs. Invitees included the CFO, Director of P&C, Chief of Human Resources and the Director of the Project Control and Management System.
[51] PPM Section 4.2.5 (Exhibit A)
[52] PPM Exhibit B
[53] PPM Section 4.3
[54] PPM Section 4.3.2
[55] PPM Section 4.2.2

providing AM support (*i.e.,* CEO, PI and Director of P&C), it showed that the Director of P&C has taken training related to management of grants. His history of coursework covered various statutory and regulatory requirements related to AM, including relevant OMB Circulars and included classes such as Managing Federal Grants and Cooperative Agreements (CAs) and Business Management Systems for Grant Recipients. None of the other individuals with AM responsibilities, including the CEO and PI have taken training related to the AM-support responsibilities.

**PRINCIPLE 2. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE AWARD.**

**PRACTICE 2.1.** The Awardee should have established procedures to monitor compliance with the Federal regulations and the terms and conditions of the award.

NEON, Inc.'s related policies and implemented practices on these compliance matters are documented in the *PPM* sections, Award Management Activities, Monitoring Programmatic Terms and Conditions[56] and Monitoring Special Terms and Conditions.[57] As described, each department[58] is envisioned to have a set of compliance matters to execute and monitor. Historically, information on the awards, modifications, and T/Cs are disseminated to administrative and programmatic staff members by the PI. He has forwarded copies of the award documents to relevant staff.[59] This practice is not aligned with the procedures outlined in the Award Management Activities section of *PPM*[60], which notes that an award summary template should be in place to annually communicate the award T/Cs to the PIs and other relevant staff. The Director of P&C (SRO) recently developed the template but it has yet to be used in a routine manner. Further and most recently the PI has been completing many of the AM activities eliminating the benefit of another "set of eyes." NEON, Inc. should continue is work on the Award Management Checklist.

The staff providing AM support is generally familiar with the award requirements and have developed sufficient procedures to address the requirements, though on occasion several existing AM policies and procedures have been missed. A broad survey revealed that, for example, NEON, Inc. has followed their policy requiring an independent auditor for yearly A-133 audits. Fiscal year audits for 2008, 2009 and 2010 were performed in a timely manner. Similarly NEON, Inc. has adequately addressed the article related to copyrightable materials and patent rights[61] and in particular with respect to property procedures by NEON, Inc.

[56] PPM Section 4.2.4 (C) (8)
[57] PPM Section 4.2.4 (C) (10)
[58] The term group and department are used interchangeably.
[59] Example provided by NEON, Inc. included the Airborne Imaging Spectrometer, Spectrometer Algorithm Development and Spectrometer Components EF-0940226 award.
[60] PPM Section 4.2.4
[61] Article 21

employees in the Intellectual Property section of the *PPM*.[62] The article related to sharing of findings, data and other research products[63] has also been fulfilled. However NEON, Inc. does not yet have a policy related to publications and addressing proper disclaimers. Additionally, there are no policies or procedures to address animal welfare, patent rights, and human research subjects. While the current award T/Cs do not apply to the work currently being performed, as NEON moves from construction into operations these may be applicable. The Director of P&Cs (SRO) is encouraged to continue work on developing procedures to address this and other issues. In particular he is encouraged to begin using the award summary document. In addition to improving their awareness the staff also needs to ensure that their practices align with written policies and procedures. For example, NEON, Inc. consistently acknowledges NSF support in its web-based materials but often fails to include the CA number and disclaimer.

**PRACTICE 2.2.** The Awardee should have procedures to implement the Federal expanded authorities as provided in 2 CFR 215.25.

As it relates to prior approvals NSF requires it for changes in scope, key personnel, long term absences of the PI, requests for additional funding, transfer of funds for participant support, and subaward activities of over $250K. Under NSF policies and procedures for cooperative agreements, NSF waives prior approval for pre-award costs less than 90 calendar days, one-time no-cost extension of up to 12 months, and carry forward of unobligated award balances.

The Award Management Activities section of the *PPM*[64] identifies procedures for expanded authorities for scope changes, no-cost extensions, changes in budget and personnel, and procurements and contracts. This section also identifies that the primary responsibility of submitting prior approval request is the responsibility of the PI and F&A after internal approvals have been granted from the SRO.

The examination of NEON, Inc.'s activities on matters related to expanded authorities and alignment with their written procedures revealed inconsistent practices. For example, of the five changes to key personnel that have occurred, three did not receive concurrence by the cognizant NSF Program Officer, even though it is required.[65] On the other-hand NEON, Inc. has submitted requests for rearrangements or alterations over $25K subaward approval, and significant changes as required by the terms and conditions of the agreement.



[62] PPM Section 1.5.4
[63] Article 43
[64] PPM Section 4.2.4
[65] One example occurred with the Airborne Observation Manager position.

**PRACTICE 2.3.** The Awardee should have a system in place to ensure adequate delivery of required reports and other deliverables.

The *PPM* addresses award reporting and states that the PI is responsible for putting processes in place to meet all sponsor reporting requirements including special reporting. Financial reporting and FFR preparation are the responsibility of F&A. Indirect cost function reporting responsibility is the responsibility of the CEO, all relevant departments, and F&A. To keep track of the various reporting requirements the PI maintains a matrix of monthly and annual reporting requirements, and sends to the Departments a data request for the reports on the 4th or 5th of the month. The PI compiles the responses and submits to NSF.

A variety of reports and deliverables are required by the cooperative agreements. The majority of the annual reports and deliverables have been submitted in a timely fashion in the format required by NSF. Four annual reports were approximately three weeks late but the NSF Program Officer was informed and concurred with the reported extenuating circumstances that led to the late delivery. Timely ARRA reports have been submitted to the FederalReporting.gov website for performance under CA[66] funded with ARRA monies. Additional details on ARRA compliance are provided in the Financial Management section of this report.

**PRINCIPLE 3. THE AWARDEE SHOULD HAVE POLICIES AND PROCEDURES FOR MONITORING THE PERFORMANCE OF SUBRECIPIENTS.**

**PRACTICE 3.1.** Systems should be in place for adequate post-award monitoring of subawards.

Direction is provided to staff in the Procurements and Contracts[67] section of the *PPM* to ensure that actions are taken to monitor subawardees compliance with the NSF terms and conditions (Procurement, Award Management, and Subaward Management).[68] Procedures implementing these policies are identified in the Subaward Management[69] section of the *Procurement and Contracts Guidance Manual (PCGM)*. Clear distinction is made between oversight responsibilities for subawards vs. procurement and contracts. Determination of the appropriate agreement mechanism is made by P&C based on the criteria established in the Subaward Management[70] and the Post Award Contract Management[71] sections of the *PCGM*. To date, NEON, Inc. has issued only one subaward to Science and Engineering Associates (SEA) for $10 million and has maintained proper flowdown provisions.

P&C staff works with the technical directors to develop the terms of the subrecipient relationship. Potential risks associated with the subaward are identified by P&C staff using the

[66] EF-0940226
[67] PPM Section 4
[68] PPM Sections 4.1, 4.2, and 4.4
[69] PCGM Section D
[70] *Ibid*
[71] PCGM Section H

form found in the High Risks Subaward Analysis[72] appendix in the *PPM*.[73] Prior to granting certain subawards, NEON will assess the potential subrecipient's organizational and financial status and internal controls as well as the terms of the proposed subaward agreement and will establish conditions for the subaward consistent with the level of risk. Prior A-133 reports are reviewed to ensure that there is no compliance findings listed and a management plan is in place to correct deficiencies. The draft agreement prepared by P&C would include any special terms and conditions to address these risks as well as the general NEON terms and conditions in the *PPM* that contain the appropriate flow-down provisions for subawards required by the NSF terms and conditions.

Once the award is issued, the Director of P&C has the primarily responsibility for performing monitoring activities through reporting and regular contact with their subrecipients. Policies are in place to ensure adequacy of the post award monitoring process. Fiscal and technical reporting requirements are monitored and the Post-Subaward Monitoring[74] section in the *PPM* and in the Subaward Management[75] section of the *PCGM*, prescribe how this is to be done. Current NEON operating procedures require the subawardee with awards greater than $250K to report annually on the results of their A-133 audits. However, the government standard has been changed to $500K which should be reflected in the policy. P&C is expected to send a form annually to the subrecipients to obtain this information although this form is not yet available. As discussed during the BSR site visit, P&C staff will notify the CEO, COO, and technical director if any findings are reported and will proceed will any remedial action necessary.

Specific subaccounts were established for ARRA funds to ensure that these costs were properly segregated consistent with the requirements of the ARRA terms and conditions. The sample review of the ARRA expenditures confirmed adherence to this requirement.

NEON's subawardee closeout policy and procedures are mentioned in the *PPM* Award Closeout section.[76] In accordance with the terms of the subaward, the subrecipient may be required to submit documentation depending on their A-133 status. "If the subrecipient is an A-133 entity, it will be required to indicate the status of its most recent A-133 audit and the results thereof, indicating any reportable conditions or qualifications relating to the subrecipient' s internal controls, noncompliance with laws and regulations, inclusion of costs or other reportable audit findings that may affect NEON'S award. If the subrecipient is a non-A-133 entity, it will be required to provide a copy of its latest annual financial report, including the latest audited financial statements and auditors' management letter." The Director of P&C and the PR department are responsible for executing and monitoring subawards. The additional closeout documentation is maintained in the subaward file, and the retention and retirement of

[72] PPM Appendix L
[73] *Ibid*
[74] PPM Section 4.4.4
[75] PCGM Section D
[76] PPM Section 4.4.4 (D)

these records (hardcopies and electronic files)[77] are maintained in accordance with NEON's record retention policy.[78]

#### 6.2.4 Results

Areas of Concern: None identified.

Areas for Improvement include:

AM-1: Update NEON, Inc., policies, procedures, NEON Responsibility Matrix, and position descriptions to ensure segregation of duties for award management. In particular the procedures ought to specify that one individual or group is responsible for compliance and a different individual or group is responsible for monitoring compliance.

AM-2: Implement updates to policies, procedures and PD and ensure they align with the changes to segregate duties. As an immediate first step the SRO's AM responsibilities should be immediately transferred from the PI to the SRO.

AM-3: Issue the individuals assigned to AM responsibilities to a FastLane user account and/or other authorizations and permissions to accomplish AM functions.

AM-4: Revisit and strengthen the current approach to assigning AM responsibilities such as the monitoring of award terms and conditions. The written procedures ought to implement a strategic approach to communication of award terms and conditions, amendments to those terms and conditions, and roles and responsibilities for compliance that includes all organizational stakeholders.

AM-5: Ensure that the written procedures practices align with associated SRO's responsibilities.

Best Practices: None identified.



[77] NEON BSR Teleconference Meeting Minutes for Procurement on June 28, 2011
[78] PPM Section 4.2.4

## 6.3 BUDGET AND PLANNING

### 6.3.1 Scope

This portion of the review included an analysis of the budget and planning administrative business systems that support the Large Facility. The review examined the management structure to determine whether the budget and planning functions align with the Facility objectives. The scope included an analysis of the Facility's budget and expenditures to determine whether budgets are adjusted to respond to changing realities. The review evaluated these systems to confirm that prescribed written policies and procedures are incorporated, internal controls are in place, and the systems are capable of supporting the Facility. The scope also encompassed an assessment of whether the systems of this core functional area are consistent with NSF expectations and are compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that a desk review and site visit were necessary.

### 6.3.2 Sources and Methods

- Awardee Participants: J. Ryan, T. Sheldon, and D. White

The desk review involved assessing the information provided by the Awardee and the information obtained *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during the scope of this review.

### 6.3.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE BUDGET PLANNING FUNCTIONS FOR THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the budget planning functions supporting the Facility.

There is an organizational and management structure that has responsibility to support NEON's budget and planning functions. This structure was presented in *NEON, Inc. Organization Charts, NEON Project Organizational Chart (All Staff)* and shows the lines of authority, staffing plans. This organization is well suited to provide budget and planning support throughout the course of the construction and operations of NEON.

The main budget and planning function is the responsibility of the Project Management Controls System (PMCS) group. This group is led by an experienced manager. There is one full-

time scheduler and four project controls analysts that report to the PMCS manager. The manager reports to the NEON project manager.

The analysts are assigned to product team leads (PTL). The analysts work with the PTLs on all aspects of budgeting, planning, and reporting. This is a known and effective technique for organizing and executing the budget and planning function that is used on other successful Facility projects.

**PRACTICE 1.2.** Roles and duties of staff members responsible for budget planning for the Facility awards should be clearly assigned and defined.

The roles and responsibilities are shown in NEON, Inc.'s *Organizational Charts* and documented in the PDs and the *PPM*. The job descriptions for the NEON Project Manager and Director of PMCS group align clearly with the B/P functions and what is depicted in the *Organizational Charts*. The *Operations/Project Control Organizational Chart* shows four staff supporting B/P; the Director of PMCS, and three analysts. Two more analysts are to be hired.

**PRACTICE 1.3.** The Awardee should ensure the staff members responsible for budget and planning receive continuing educational opportunities to allow them to successfully carry out their duties.

The staff responsible for providing B/P support has received basic and advanced training in the COBRA system.[79] As new staff is hired to the group they will receive training in COBRA and Primavera (schedule tool).

**PRINCIPLE 2. THERE IS A SYSTEMATIC PROCESS FOR FORMULATING OPERATION BUDGETS FOR THE LARGE FACILITY.**

**PRACTICE 2.1.** The Awardee should have written processes and procedures, and use historical database information in developing operation budgets for the Facility.

NEON budgets have been reviewed numerous times in recent years including during the Pre-construction review held April 4-6, 2011. The review panel was very favorable in its assessment of NEON budgetary readiness and stated "The NEON cost estimate is well documented and ready to begin the construction phase."

**PRACTICE 2.2.** The Awardee should establish a process for developing operational budget estimates that are reasonable and consistent with the scope and activity of the Facility.

NEON has a systematic process for formulating budgets. This was discussed during the site visit and appears to be well developed and sufficient to support, monitor, and adjust resources to achieve the goals of the project. There is a process documented in the *NEON Cost Estimating*

[79] COBRA is the cost estimating and earned value reporting tool used by NEON, Inc.

*Plan*. Cost estimates are developed by PTLs in conjunction with a project controls analyst. These analysts are experienced cost estimators that help PTLs develop a detailed bottom-up cost estimate at the lowest reasonable level of activity. Cost estimates are collected in spreadsheet form by WBS. Estimates for categories such as staff labor, contract labor, equipment, instrumentation, travel, materials and supplies, and subcontracts are developed. The estimator also documents supporting information substantiating each element of cost.

NEON employs a suite of tools that enable the project to develop detailed cost and schedule estimates and to report Earned Value performance. Scheduling is developed in Primavera. Cost estimates are formulated in COBRA. Earned value data is collected from PTLs and entered into the COBRA database along with accounting actuals. COBRA is then used to report cost, schedule, and earned value performance on a monthly basis.

**PRACTICE 2.3.** The Facility program staff should be integrated into the budget planning process.

In practice the Finance and Accounting group provides the PMCS group with financial actuals used for the EV reporting. However, there appears to be minimal communications beyond the monthly exchange of this data. One example, the actual labor cost reporting (*i.e.*, cost based accounting system methods), seem to present difficulty for PMCS that may lead to ambiguity in reports of EV. There is no structure in the current arrangement for the two groups to work through this specific issue and other future challenges that are likely to arise.

**PRACTICE 2.4.** The large Facility budget should be aligned with the annual and long-term goals and objectives of the Facility.

The Facility budget and schedule are defined in the *PEP*. The Integrated Project Schedule (IPS) section of the *PEP* describes how all activities required meeting the scientific, technical, and project objectives are planned and ultimately budgeted. The NEON, Inc. *Mid-Term Business Plan* clearly defines a set of goals and objectives. These goals and objectives are represented in the project IPS by a series of integrated activities, critical tasks, and milestones.

This approach is commonly used in other Facility projects. It allows flexibility in planning over extended periods and the ability to modify plans due to changes in either funding or other external factors that must be accommodated in order to achieve project success.

**PRINCIPLE 3. AN ESTABLISHED PROCESS ENSURES THAT BUDGETS ARE ADJUSTED IN RESPONSE TO CHANGES AFFECTING THE FACILITY.**

**PRACTICE 3.1.** The Awardee should have procedures for tracking and revising the budget.

NEON, Inc. has an established process for making budget adjustments in response to changes that affect NEON. Evidence of this process was observed in how NEON recently adjusted their annual construction budget for 2011 to $12.5M from the originally requested amount of $20M.

At a high-level and in practice this process includes the NEON PM working with the funding agency (NSF) on a reduction in scope and corresponding milestones that meet the new funding level. Changes to budgeted cost of work scheduled are reviewed and discussed with PMCS and PTLs. Allocations to each subsystem are made and the details are implemented by the PTLs and the PMCS analyst in each area (product team or subsystem).

**PRACTICE 3.2.** The Awardee should establish procedures for year-end closeout.[80]

NEON, Inc.'s policies and procedures for year-end NEON budget closeout are not clearly documented. In practice budget and schedule variances are reconciled on a monthly basis through a change request process, and an activity which reconciles entries in COBRA[81] against those in NEON, Inc.'s accounting system. An annual report is also generated to outline the NEON Project's spend against the projected for the upcoming year, and to provide staff with a broader picture of budget activity.

The description of activities associated with budget closeout (noted above) should be clarified. This should include a timeline of all budget exercises performed throughout the fiscal year (e.g., development, periodic review, and monthly reconciliation). When updated the procedures should be compared with other CFA-specific closeout actions (e.g., subawardee monitoring and oversight) outlined in the PPM to determine if these should also be referenced.[82]

**PRACTICE 3.3.** The Awardee should have systems to adequately and accurately track budgets and expenditures for all the lifecycle stages of the Facility.

Actual expenditures are collected monthly by the Controller. These expenditures are uploaded into the COBRA element of the PMCS system. The PMCS system is then used to generate detailed earned value reports each month. Significant variances in either planned cost or schedule are reported to stakeholders and plans to mitigate these variances are produced by the appropriate subsystem and/or PTL. This process for tracking budget and actual expenditures will be used at all stages of the project from design and development through construction and into operations.

ARRA funds are segregated from other funding streams as documented in the PPM.[83] These funds and expenditures against them are tracked independently as required by the NSF.

[80] For clarity it should be noted that year-end closeout in budget and planning does not refer to the standard year-end close performed by accounting, i.e. close out business from the previous year, carry forward balances, and open new accounts and charge numbers
[81] NEON Project Management Control Systems Design Plan
[82] PPM Section 3.8.2
[83] PPM Section 4.3

**PRACTICE 3.4.** Regular budgeting and financial reports should be produced for Facility management, program and budget personnel.

The Financial Department develops an indirect report and it is approved by the CFO. The Director of the PMCS group is currently developing an internal report to demonstrate direct costs as discussed during the BSR site visit meeting. NEON monthly reports are detailed accounts of achievements, ongoing activities/upcoming events, and external interactions across all product teams and important elements of the project.

**PRINCIPLE 4. PROCESSES ARE IN PLACE TO ADDRESS BUDGETARY UNCERTAINTY.**

**PRACTICE 4.1.** The Awardee should plan, to the extent possible, for unforeseen circumstances affecting Facility budgets.

The NEON Project has a formal *Contingency Management Plan (CMP)*. This document conforms to the principles described in the *NSF Large Facilities Guide*. The NEON CMP includes a description of how budget contingency is estimated by a bottom-up analysis at the line item level using a risk based formula. Schedule contingency is added explicitly to key time-critical elements in the schedule. Access to contingency is managed through a formal change control process that can be levied against configuration changes, budgetary requests, and/or schedule change requests.

**PRINCIPLE 5. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE TO ENSURE COMPLIANCE WITH THE TERMS, CONDITIONS, AND SPECIFICATIONS OF THE AWARD RELEVANT TO BUDGET AND PLANNING.**

**PRACTICE 5.1.** The Awardee should have procedures in place to monitor compliance with the reporting requirements relevant to budget and planning.

There are several BP related terms and conditions in the award cooperative agreement. It is unclear how these are monitored, changed or updated.

### 6.3.4 Results

<u>Areas of Concern</u>: None identified.

<u>Areas for Improvement</u> include:

BP-1: Finance and PMCS should immediately examine alternative ways to account for labor actuals that would allow a more standard way of reporting EV. The NSF requires clear, concise EV reports that accurately reflect performance.

BP-2: The connection and communication between the Finance group and the PMCS group should be strengthened. NEON, Inc. should investigate formal structures that would facilitate routine interaction between these two groups. One approach may be to hire a business manager to serve as a technical liaison between the two groups. In the interim, these two groups should set routine meetings to collectively discuss issues related to budget data and revise joint solutions.

BP-3: An organization-wide approach to compliance monitoring terms and conditions ought to be developed. If the procedures require functional groups such as PMCS, to be involved with monitoring then training should be provided to ensure that staff understand the associated expectations and responsibilities.

BP-4: The year-end budget closeout process needs to be more fully documented. Existing documentation ought to more clearly specify how and when variances, for example, are reconciled between the NEON, Inc. accounting system and COBRA.

Best Practices: None identified.

## 6.4 FINANCIAL MANAGEMENT

### 6.4.1 Scope

This portion of the review included an assessment of the financial management administrative business systems supporting the large Facility and the organizational structure in place to support these functions. The review evaluated these systems to confirm that prescribed written policies and procedures are incorporated into the Facility's practices, internal controls are in place, and the systems are capable of supporting the Facility. The review identified whether or not sampled costs claimed are adequately documented, allowable, reasonable, allocable, and consistently charged. The review also assessed whether or not the system can segregate direct and indirect costs, whether or not procedures are in place to accurately record time and effort costs, and whether or not the accounting systems enable the Awardee to provide appropriate business and financial oversight of the award. The scope also encompassed an assessment of whether or not the systems of this core functional area are consistent with NSF expectations and compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that both a desk review and a site visit were necessary.

### 6.4.2 Sources and Methods

- Awardee Participants: M. Nowiki, T. Sheldon and D. White.

The desk review involved assessing the information provided by the Awardee and the information obtained *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit with Awardee participants. Appendices B and C contain a list of supporting documentation gathered during the scope of this review.

Testing was performed to assess the financial management system. Transaction records from one completed Federal Financial Reporting (FFR) quarterly reporting period(s) were reviewed. A subsample of 12 transactions was judgmentally selected to include a variety of expense types such as labor, travel and supplies.[84] The recorded costs and the corresponding source documentation were examined against selected attributes. The results of the review are presented in Table 3.



[84] Period covering May 2010 through April 2011

**Table 3. Summary of Results from Financial Transaction Review**

| Award | File No. | Amount ($K)[1] | Date (mm/dd/yy) | Expense Type | Incurred Within Award Period | Allowable, Allocable, Reasonable | Consistent Treatment of Cost | In Compliance with Awardee Policies | Adequate Backup | Questioned Cost (Yes/No) |
|---|---|---|---|---|---|---|---|---|---|---|
| EF-0752017 | Ref # 201172 | 0.055 | 5/19/10 | Employee Welfare | OK | INSUFF | INSUFF | INSUFF | OK | YES |
| EF-0752017 | Ref # 6846 | 0.500 | 3/17/11 | Honorarium | OK | OK | OK | OK | OK | NO |
| EF-0752017 | Doc # 000020641 | 4.667 | 3/18/11 | Labor | OK | OK | OK | OK | OK | NO |
| EF-0752017 | PO 1269 | 0.667 | 3/30/11 | Materials | OK | OK | OK | OK | OK | NO |
| EF-0752017 | PO 000996 | 52.66 | 3/02/11 | Capital Acquisition | OK | OK | OK | OK | OK | NO |
| EF-0752017 | Doc # 0000202434 | 4.045 | 3/18/11 | Travel | OK | OK | OK | OK | OK | NO |
| EFT-0808232 | Ref # 200848 | 0.109 | 1/28/10 | Employee Welfare | OK | INSUFF | INSUFF | INSUFF | OK | YES |
| EF-0940226 | 87-15011-R (#6) | 504.5 | 3/15/11 | Capital Acquisition | OK | OK | OK | OK | OK | NO |
| Indirect Costs | Doc # 20922 | 4.45 | 3/25/11 | Labor | OK | OK | OK | OK | OK | NO |
| Indirect Costs | Doc 0000202387 | (2.95) | 3/29/11 | Travel | OK | OK | OK | OK | INSUFF | NO |
| Indirect Costs | Cr. Memo # 903610142 | (1.61) | 4/05/11 | Freight | OK | OK | OK | OK | OK | NO |
| Indirect Costs | 109326 | 4.14 | 4/05/11 | Office Supplies | OK | OK | OK | OK | OK | NO |

OK = denotes sample meets review requirements; INSUFF = indicates that the sample does not meet requirements; NIF = indicates that adequate supporting documentation was not in file; YES = indicates cost was questioned; NO = indicates cost was not questioned; [1]amounts have been rounded

### 6.4.3 Observations

**PRINCIPLE 1. A STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE FUNCTIONS OF FINANCIAL MANAGEMENT.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the financial management functions supporting the Facility.

The CFO and his staff provide Financial Management (FM) support for NEON. The Controller and four staff comprise the Finance Department and carry out the financial management functions. Names and staff positions are identified on the NEON, Inc. *Organizational Charts (Finance, Accounting and Logistics)* as well as the *Finance Department Organization Chart* in the *Accounting Manual*. The *Accounting Manual* chart represents a "working model" reflecting both current and future (to-be filled) FM positions. Staff appears to understand their current roles and responsibilities.

**PRACTICE 1.2.** Roles and duties of staff members responsible for financial management of the Facility awards should be clearly assigned and defined.

Roles are documented in PDs, *PPM*, and the *Accounting Manual* although documentation is not necessarily aligned with current operating procedures. There are several references to staff responsibilities for positions yet to be hired. At times it is difficult to make a corresponding relationship between proposed functions with current responsibilities. In addition, inconsistencies exist in titles, terms, and PD duties. For example, the Controller's Office is also referred to in various documents as the Finance Office or Accounting Office, position titles vary between Accountant I and Account Assistant, etc., further exacerbating the issue. The *PPM* and the *Accounting Manual* should be updated to ensure that references to the Finance Department and job titles of staff are consistently referred to throughout.

**PRACTICE 1.3.** The Awardee should ensure that financial management staff members receive continuing educational opportunities to allow them to successfully manage Federal awards.

The training records suggest that staff have taken advantage of external training opportunities to remain up to date on financial management requirements. In addition, staff have participated in several in-house learning opportunities (*e.g.,* Procurement Process, Access to Dynamics) to stay current on the financial management system. To supplement, the Controller also mentors staff and teaches on various topics such as cost allowability issues, expense reports, and travel policy. The newly hired Learning and Development Manager will work with the CFO and Controller to develop a comprehensive training program for staff on FM related matters.

**PRACTICE 1.4.** The Awardee should ensure an appropriate segregation of duties for staff members performing the financial management functions for the large Facility.

The duties of the staff members performing the financial management functions for NEON, Inc. are appropriately segregated and documented in the *PPM*, the PD and in the *Accounting*

*Manual*. Financial duties and responsibilities are separated so that no staff member has sole control over cash receipts, cash disbursements, timecard processing and payroll, and other accounting functions. The PDs supporting each of the Finance Department staff members lists specific duties which are not split among positions. Although segregation of duties is not explicitly addressed in the documents, the duties and responsibilities listed support the division of responsibilities.

In the *PPM*, policies and procedures associated with cash management and advances [85] are outlined to provide for appropriate segregation. The roles of the CFO and Controller are specified for cash advances (both NSF and non-NSF), other cash receipts, cash disbursements, and financial reporting.

In the Division of Duties section of the *Accounting Manual*,[86] greater detail is provided on the key responsibilities of staff in the Finance Department. Access to the Microsoft Dynamics SL (MDSL) system[87] (accounting system) is restricted based on job functions, which are listed in Appendix A of the *Accounting Manual*. The matrix on Internal Controls[88], addresses the areas of financial risk and the controls in place reinforcing the segregation of duties. There is a recognition cited in the *Accounting Manual* that key duties listed for current staff may be reassigned as the department grows and responsibilities change. This is understandable with the increase in the budget and NEON, Inc. will ensure that the important financial responsibilities will remain segregated.

**PRINCIPLE 2. THE AWARDEE SHOULD HAVE AN ADEQUATE ACCOUNTING SYSTEM THAT IS COMPLIANT WITH THE APPLICABLE GENERALLY ACCEPTED COST PRINCIPLES (2 CFR 220, 2 CFR 230, FAR PART 31), ADMINISTRATIVE REQUIREMENTS (2 CFR 215), AND INTERNAL POLICIES AND PROCEDURES.**

**PRACTICE 2.1.** The Awardee should have systems in place to ensure compliance with mandated Federal and award specific requirements for cost principles, audit and administrative requirements, and other financial compliance regulations.

NEON, Inc. has policies, procedures, and systems in place to comply with the A-122 cost principles and the A-110 administrative requirements. Two primary documents adequately describe the policies and procedures associated with the financial management systems. The *PPM* includes the Finance and Accounting section:[89] covering topics such as NEON, Inc.'s cost policy, cost allocation methodologies, cash management and advances, and the preparation of the FFR, ARRA and ICRP reports. The *Accounting Manual* outlines basic accounting procedures designed to maintain accurate records of financial activities for NEON, Inc., which comply with

[85] PPM Section 3.4
[86] Accounting Manual Section 2
[87] Accounting Manual Appendix A
[88] Accounting Manual Appendix B
[89] PPM Section 3

generally accepted accounting principles and governmental and other financial reporting requirements. These procedures are designed to ensure that finances are managed with responsible stewardship. The Manual includes a description of the functionalities of the accounting system and specifies the process to record various transactions into the Dynamics system.

Some of the sections that are planned for incorporation into the *Accounting Manual* are still under development. Specifically, sections on internal audits, year-end close and external audits, have not yet been completed. The CFO indicated that completion of these sections is scheduled to be done by March 2012 but progress will be dependent on other activities adding to their workload (*e.g.*, NSF OIG-contracted DCAA audit of the accounting system).

In practice and in the absence of written and approved protocols, internal audits are not being conducted with the exception of Controller's review. Additionally external audits are not being handled using standard business practices. This became apparent in discussions about the current cost proposal audit being conducted by NSF OIG/DCAA. The Finance Department was not included in preliminary discussions with the DCAA auditors and, as a result, key information related to development and application of the indirect cost rate was not fully conveyed. This contributed to DCAA's initial conclusion that the cost proposal was not auditable. As a matter of standard business practices, NEON, Inc. should have written protocols defining how external audits are managed. To manage potential conflicts and strengthen integrity, these protocols should be executed in a consistent manner and led by the Finance Department. The process should require a range of functional representatives from NEON, Inc. and NEON[90] be involved in all audits.

There are also some quality and editing issues with the *Accounting Manual*, such as inconsistent numbering, but the CFO and Controller are aware of these issues and will address them in the next iteration. The *Manual* is considered as "desk level" and does not need to go through a formal processing for revision. The CFO indicated that the plan is to review financial management procedures at least annually or on an as-needed basis.

NEON has also complied with all of their other financial compliance regulations. For the last three years, independent external auditors conducted and completed audits of NEON, Inc.'s consolidated financial statements and assessed NEON, Inc.'s compliance with requirements of Office of Management and Budget (OMB) Circular A-133. The most recent audits did not cite any reportable findings. Issues identified in the 2008 audit had adequately been addressed and resolved by NSF.



[90] Placeholder for future projects

**PRACTICE 2.2.** The Awardee should have a system in place to ensure that costs charged to the NSF award benefit and are properly charged to the sponsored project account. Costs should be consistently treated as direct or indirect costs. Allocated costs (fringe benefits, F&A, or IDC) should be equitably distributed. Internally allocated costs, such as recharge centers, should be periodically reviewed and approved by the Awardee.

NEON, Inc. uses Microsoft Dynamics SL (MDSL) accounting system to ensure costs are properly accumulated and charged to the sponsored project account. Written policies and procedures associated with the financial management system are documented in the *PPM* and the *Accounting Manual*. Information on the basic accounting procedures and cost accumulation processes are described in the *PPM*. The accounting structure and codes used to accumulate indirect costs separate from direct costs are identified in the Section of Financing and Accounting, Cost,[91] of the *PPM* which also address indirect allocation procedures as well as a description of cost allocation methodologies.

All expenditure information is captured in both the General Ledger (GL) and the Project Account ledger. The GL captures revenue, expense, and asset and liability data and adheres to Generally Accepted Accounting Principles (GAAP) and Federal requirements in the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Standards for Financial Management Systems[92] subsection. The Project module tracks revenue and expense at the project level by grouping expenses by project, task and cost category. Overhead and fringe benefit expenses are allocated monthly based on an estimated rate that is less than the provisional rate cited in the NSF awards. The indirect cost recovery is reconciled at the end of the fiscal year when an actual final rate can be established based on actual expenditure information.

Based on the review, it was determined that the financial management system and staff in place were adequate to address the active awards on hand. Costs that were reviewed were appropriately charged to distinct project accounts (*e.g.*, implementation plan, ARRA). However, NEON just received the construction award which will dramatically increase the funding level for the institution and present challenges in managing all of the various awards. Additional levels of scrutiny will be required to ensure that costs are appropriately segregated and allocated to specific projects. Specifically, costs appropriated for NEON construction should not be comingled with those provided for operations. To ensure that costs are allocated properly, NSF plans to revisit NEON within a year and perform a limited financial management review.

The samples reviewed generally conformed to the allowable cost guidance in the *PPM* although some discrepancies were found (Table 3). Specifically, a listing of employee morale costs was provided for the review. The listing reflected allowable, unallowable, direct, and indirect costs for similar types of expenses. There were no guiding principles on how these costs should be

[91] PPM Section 3.1
[92] 2 CFR 215.21

charged. The allowability of these types of costs needs to be consistent with the Cost Principles for Non-Profit Organizations[93] and Employee Morale, Health and Welfare Costs[94] and Entertainment Costs.[95] The CFO indicated that an Employee Activity Group was being established which would have control over funding for these activities. Responsibilities of this group will be included in the *PPM* with allowable activities identified.

**PRACTICE 2.3.** The Awardee should have written policies and procedures defining allowability of costs that are consistent with Federal cost principles and the NSF award.

Various policy documents provide guidance to staff for determining allowability on certain expenses but there was no comprehensive list available. Staffs are referred to the A-122 Cost Principles for the listing of costs considered allowable under Federal awards. However, the *PPM* does highlight six specific types of unallowable costs so that staff members do not charge these types of costs to Federal agreements. Other types of unallowable costs are included in the A-122 listing.

In house training sessions are held periodically to provide staff with tools necessary to determine the allowability and allocability of costs. Emphasis is placed on adherence to the requirements in Circulars OMB A-122 and A-110, the award terms and conditions, and internal policies.

Costs are reviewed for allowability and allocability by the PI and department heads before the expenses are forwarded to the Finance Department for payment. The Project Accountant provides a final review before costs are processed. It was evident during the onsite review that the Controller and her staff were knowledgeable of NEON, Inc. policies and provided the necessary oversight to ensure that costs incurred were considered allowable. However, there were no specific guidelines or procedures to document the review process.

Specific subaccounts were established for ARRA funds to ensure that these costs were properly segregated consistent with the requirements of the ARRA terms and conditions. The sample review of the ARRA expenditures confirmed adherence to this requirement (Table 1Table 3).

There are mechanisms in place to exclude unallowable costs from being recorded and claimed under Federal awards. Specific discretionary accounts and object codes are set up to record unallowable costs to ensure that these costs are properly treated in the F&A calculation.

The Controller monitors expenses monthly as part of her oversight review to ensure that costs incurred are allowable and all unallowable costs that were not coded properly are not processed through the system. Expenditures that are identified as nonrecoverable costs are returned to the department to be recoded.

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[93] 2 CFR 230
[94] 2 CFR 230 Appendix B.13
[95] 2 CFR 230 Appendix B.14

**PRACTICE 2.4.** The Awardee should have policies and systems that differentiate costs as direct and indirect based on applicable Federal regulation and the terms of the negotiated IDC rate agreement.

Process guidelines for calculating and claiming indirect costs are provided in *PPM* Indirect Cost Budgeting[96] section. Employees working in NEON Headquarters functions, such as Finance, Human Resources and IT, charge their time to indirect cost accounts. Personnel working on direct programs only charge their time to an indirect project when engaged in any activities that are not attributable to direct program operations.

The NSF awards to NEON, Inc. include a maximum provisional rate of 60% of MTDC base. NEON, Inc.'s actual indirect cost rate has never exceeded the ceiling rate. The Dynamics financial system automatically calculates the IC recovery based on the rate and base entered into Dynamics when the project account was created. To calculate IC recovery, NEON, Inc. uses the Simplified Allocation Method by separating the total costs for the base period as either direct or indirect and dividing the total allowable indirect costs by an equitable distribution base. Reports are generated monthly and annually comparing budgeted costs to actuals and variances are taken into account each month to determine a need for an adjustment. The allocation rates may be adjusted mid-year if operating experience suggests a significant variance. The final rate is determined using actual costs on an annual basis and is applied retroactively at the close of each fiscal year. The Account Detail for NEON, Inc Budgets Chart[97] and the NEON, Inc Indirect Departments List[98] are listed in the in the Indirect Cost Budgeting section of the *PPM* and provide the account detail for NEON, Inc. Indirect Cost.

The increase in construction contracts will affect the IC rate used to recover NEON's indirect costs. The CFO should work with the NSF CAAR contact to ensure that there is a complete understanding of the impact that the construction component will have on the rate.

**PRACTICE 2.5.** The Awardee should have a system in place for accurate and consistent recording and reporting of direct time and effort costs charged to the NSF award.

Guidance regarding time and effort policies, procedures and system requirements are documented in the *PPM*[99] and the *Accounting Manual*. The Time Reporting section of the *PPM*[100] explains the procedures for documenting and recording hours worked. It is the policy of NEON to record all hours worked in accordance with NEON's timekeeping principles and

[96] PPM Section 3.2
[97] PPM Section 3.2 Exhibit A
[98] PPM Section 3.2 Exhibit B
[99] PPM Section 1.2
[100] PPM Section 1.2.18

OMB Circular A-122. This policy supplements the Time and Attendance Policy[101]and is used as a guideline for completing time reports (electronic and/ or hardcopy) on a daily basis.

All employees must prepare and submit authorized time sheets on a weekly basis. The time sheet, approved by the supervisor, must list the project and task worked on during the week. The accounting system, which contains authorized project and task codes for each employee, prevents improper and unauthorized codes to be entered.

NEON, Inc. currently uses ADP, an independent third-party payroll processing company to process pay, payroll taxes, payroll deductions, and deposits for the organization. The HR department manages the payroll process but provides information to the Finance Department for reconciliation to the General Ledger and to the bank. After the payroll is processed, ADP sends HR department several reports summarizing the payroll data. HR reviews and approves the payroll and forwards the data along with supporting report information[102] to the Finance Department for reconciliation to the general ledger and to the bank.

Once the payroll data is entered by the Project Accountant into the Journal Entry module of the accounting system a packet of reports[103] is submitted to the Controller including the Labor and Expense Report. The Timecard Processing section of the *Accounting Manual*[104] provides detailed procedures on time card processing.

The timecards that were reviewed as part of the samples were completed accurately and timely.

**PRINCIPLE 3. SYSTEMS SHOULD BE IN PLACE TO ENSURE THAT PROPER SOURCE SUPPORTING DOCUMENTATION IS MAINTAINED FOR COSTS INCURRED UNDER THE NSF AWARD.**

**PRACTICE 3.1.** Charges booked to the project cost ledger for the NSF award should be supported by adequate source documentation.

FM practices at NEON, Inc. require documentation to support the costs incurred for NEON. Supporting documentation is stored electronically in the Dynamics system with the hardcopy files stored in the Controller Office records. Detailed documentation policies are in the Documentation Record and Storage[105] section of the *Accounting Manual*. This section references various financial types that are stored, identifies the financial person responsible for the document, and specifies the specific storage location where the document can be found.

[101] *Ibid*

[102] Gross Pay Report in Excel format created by HR, Statistical Summary and Payroll Register Totals (both in PDF format created by ADP).

[103] Journal Entry, payroll register, statistical summary, Gross Pay Report for F&A, NEON, Inc. Payroll Reconciliation Report, and NEON, Inc. Labor and Expense Report.

[104] Accounting Manual Section VII

[105] Accounting Manual Section E

The documentation reviewed to support the sampled costs was determined to be adequate although, in one example, the supporting justification could have been strengthened (Table 3). Specifically, one of the travel expenditures reviewed did not include a complete explanation of why the cost was incurred. However, the Controller was familiar with situation and was able to provide a reasonable explanation. NEON, Inc. should develop internal processing guidelines for PIs and staff on the requirements for developing adequate justifications. Supporting documentation for the transaction samples could be improved by providing additional descriptive information or explanations on the need for the items or services.

**PRINCIPLE 4. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE TO ENSURE COMPLIANCE WITH THE TERMS, CONDITIONS, AND SPECIFICATIONS OF THE AWARD RELEVANT TO FINANCIAL MANAGEMENT.**

**PRACTICE 4.1.** The Awardee should have procedures to monitor compliance with the award terms, conditions and specifications relevant to financial management.

The Controller's staff has overall responsibility to ensure that all costs incurred under the NSF award are allowable, allocable, reasonable and consistent with the A-122 costs principles before payment is made. Defined responsibilities for this financial management review are detailed in position descriptions, the *PPM* and the *Accounting Manual*.

There are various levels of review before costs are finalized. FM compliance begins at the project level. The COO and technical director have broad FM responsibilities for day-to-day management of the project. All project costs incurred are expected to be reviewed and approved at this level before they are forwarded to the Controller's office for payment. This approval indicates that the costs are considered allowable and reasonable for the project and consistent with NEON's operating policy.

The Controller Office's staff provides the final review for allowability before payment is made. They ensure that supporting documentation is attached and the expenditure is justified. Discrepancies or issues are brought to the attention of the Controller who works with the COO and project director to reconcile the cost before payment is made. Staff within the CFO's Office appears knowledgeable of their responsibilities and have a clear understanding of the internal FM requirements to manage the Facility award.

#### 6.4.4 Results

Areas of Concern: None identified.

Areas for Improvement include:

FM-1: Ensure that materials (organizational charts and references in PDs, *PPM*, and the *Accounting Manual*) are consistent and aligned with roles and responsibilities of FM staff. Titles, terms, and *PD* duties should reflect current operating positions. The *PPM* and the *Accounting Manual* should be updated to ensure that references to the Finance Department and job titles of staff are consistently referred to throughout.

FM-2: Priority should be given to completing the *PPM* and the audits sections of the *Accounting Manual*. Internal audit control mechanisms should be developed documented and implemented checking basic internal control processes on a routine basis. Further basic protocols for handling external auditors should be developed and implemented immediately with all audits.

FM-3: Policies, procedures and practices should be revised to ensure CFO participation and concurrence in all financial representations for NEON, Inc. This will provide for necessary checks and balances to the process.

FM-4: The CFO should organize support documentation related to the development of the indirect cost rate identified in the cost proposal and include a narrative that clearly explains how the rate was developed. This should also include a justification to support the indirect cost recovery in the construction cost proposal should be documented. Further, all appropriate functional representatives should participate in discussions with the DCAA auditors.

FM-5: Develop a policy and practice to address allowability of Employee Morale Costs. Written policies and procedures on employee morale should be included in the *PPM* and address the responsibilities of the new Employee's Activity (EA) group. Clear distinctions should be made between those EA sponsored activities that are considered allowable and those considered unallowable. All expenses associated with these types of costs that have been incurred should be reviewed for allowability, allocability and reasonableness. Charges that would be considered unallowable in context of the new policy should be removed from the NSF award. Ensure that the policy fully complies with the Cost Principles for Non-Profit Organizations[106] and Employee Morale, Health and Welfare Costs[107] and Entertainment Costs.[108]

FM-6: Review written protocols pertaining to support documentation and ensure that proper justification for expenses is required. Training should be provided to review the protocols and alignment of associated practices.

Best Practices: None identified.

[106] 2 CFR 230
[107] 2 CFR 230 Appendix B.13
[108] 2 CFR 230 Appendix B.14

## 6.5 FINANCIAL REPORTING

### 6.5.1 Scope

This portion of the review included an assessment of the financial reporting administrative business systems supporting the Facility and the organizational structure in place to support these functions. The review evaluated these systems to confirm that prescribed written policies and procedures are incorporated, internal controls are in place, and the systems are capable of supporting the Facility. An analysis of the policies and procedures used for cash draw downs and the process for the preparation and submission of financial reports was also included in the review, as well as an assessment of whether the systems of this core functional area are consistent with NSF expectation and compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that both a desk review and a site visit were necessary.

### 6.5.2 Sources and Methods

- Awardee Participants: T. Sheldon and D. White

The desk review involved assessing the information provided by the Awardee and collected *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during this review.

The FR systems were tested as follows:

- **Cash Request Review:** Four cash request samples were randomly selected from those submitted by NEON, Inc. during the last completed four quarters.[109] Each cash request was compared to the supporting backup documentation,[110] and general ledger information maintained by the Awardee and evaluated against selected attributes. The results of the review are presented in Table 4.
- **Federal Financial Report (FFR) Review:** Award expenditure amounts submitted to NSF during the last four completed quarters by NEON, Inc. were selected for review.[111] The quarterly amounts reported on the FFR for three awards were compared against the amounts recorded in the accounting system, the supporting documentation,[112] and

[109] Period covering from 2010 and 2011
[110] Included NSF Awards: DBI-0735106, DBI-0940226, DBI-00808232
[111] Period covering from 2010 and 2011
[112] Included NSF Awards: DBI-0735106, DBI-0940226, DBI-00808232

general ledger information to ensure that the expenditures reported on the financial reports reconciled to the accounting records and to ensure that the documentation adequately supports the amounts reported. The results of the review are presented in Table 5.

- **Expenditure Review:** 12 transactions were randomly selected from those reported in four completed quarters by NEON, Inc.[113] The data and supporting documentation[114] for these costs were evaluated against three awards. The results of the review are presented in Table 6.

**Table 4. Summary of Cash Request Sample Review**

| Amount ($)[1] | Date (mm/dd/yy) | Cash Request Accuracy and Reasonableness | Cash-On-Hand Reasonableness | Adequate Backup Documentation |
|---|---|---|---|---|
| 200 | 03/18/10 | OK | OK | INSUFF |
| 675 | 08/30/10 | OK | OK | OK |
| 250 | 09/10/10 | INSUFF | OK | OK |
| 370 | 03/03/11 | OK | OK | OK |
| OK = denotes sample meets review requirements; INSUFF = indicates that the sample does not meet requirements; [1]amounts have been rounded | | | | |

**Table 5. Summary of FFR Sample Review**

| Award No. | Amount ($K)[1] | Quarter Ending (mm/dd/yy) | FFR Reconciles with Accounting Records | Adequate Backup Documentation |
|---|---|---|---|---|
| DBI-0735106 | 1,994 | 06/30/10 | OK | OK |
| DBI-0940226 | 5,254 | 09/30/10 | OK | NIF |
| DBI-0940226 | 6,680 | 03/31/10 | OK | OK |
| DBI-00808232 | 4,553 | 03/31/10 | OK | OK |
| OK = denotes sample meets review requirements; INSUFF = indicates that the sample does not meet requirements; [1]amounts have been rounded | | | | |



[113] Period covering from 2010 and 2011

[114] Included NSF Awards: EF-0752017, EFT-0808232, EF-0940226

**Table 6. Summary of Expenditure Sample Review**

| File No. | Amount ($K)[1] | Date (mm/dd/yy) | Transaction (Type) | Expenditure Amount on Backup Traces to Accounting Records | Adequate Backup Documentation |
|---|---|---|---|---|---|
| Ref # 201172 | 0.055 | 5/19/10 | Employee Welfare | OK | OK |
| Ref # 6846 | 0.500 | 3/17/11 | Honorarium | OK | OK |
| Doc # 000020641 | 4.667 | 3/18/11 | Labor | OK | OK |
| PO 1269 | 0.667 | 3/30/11 | Materials | OK | OK |
| PO 000996 | 52.66 | 3/02/11 | Capital Acquisition | OK | OK |
| Doc # 0000202434 | 4.045 | 3/18/11 | Travel | OK | OK |
| Ref # 200848 | 0.109 | 1/28/10 | Employee Welfare | OK | OK |
| 87-15011-R (#6) | 504.5 | 3/15/11 | Capital Acquisition | OK | OK |
| Doc # 20922 | 4.45 | 3/25/11 | Labor | OK | OK |
| Doc 0000202387 | (2.95) | 3/29/11 | Travel | OK | INSUFF |
| Cr. Memo # 903610142 | (1.61) | 4/05/11 | Freight | OK | OK |
| 109326 | 4.14 | 4/05/11 | Office Supplies | OK | OK |

OK = denotes sample meets review requirements; NIF = documentation not in file; INSUFF = indicates that the sample does not meet requirements; [1]amounts have been rounded; parentheses indicate negative amount

### 6.5.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE FINANCIAL REPORTING FUNCTIONS FOR THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the financial reporting functions supporting the Facility.

The CFO and Controller are responsible for complying with all of the financial reporting requirements for NEON. *NEON, Inc. Organization Chart (Finance, Accounting and Logistics)* depicts this management structure and lines of authority for financial reporting but they are inconsistent with their internal *Accounting Organizational Chart*. Specifically, the *Finance, Accounting and Logistics Chart* include name and position titles of current staff at the direct report level with future positions highlighted but these do not correspond to this listed on the *Accounting Organizational Chart* in the *Accounting Manual*. Position titles vary (*e.g.*, Accountant Assistant, Finance Assistant, Project Accountant Project Account Supervisor, Senior Accountant,

A/P Specialist). The discrepancy in position titles between these charts and in the narrative of the *PPM* and *Accounting Manual* is inconsistent which needs to be addressed as construction ramps-up and the final hires are completed, it will be important for staff to understand the organizational structure and associated responsibilities. Having clearly documented charts with position titles and division of duties will clearly identify roles and responsibilities.

**PRACTICE 1.2.** Roles and duties of staff members responsible for FFR preparation and cash management for the Facility awards should be clearly assigned and defined.

Financial reporting roles and responsibilities are properly segregated. No staff member has sole control over cash receipts, cash disbursements, timecard processing and payroll, and other accounting functions.

The CFO is responsible for complying with the financial reporting requirements for NEON. He relies on the Controller and her staff, who have oversight of the FFR and cash management processes, to compile the data and prepare the reports. Authorities, roles and process responsibilities for these assignments are outlined in staff PDs as well as policy documents. Specifically, the Preparation and Reconciliation of the FFR, ARRA and ICRP section of the *PPM*[115] documents the processes required for FFR, ARRA and ICRP reporting and refers to the roles and duties of the CFO and Controller associated with these procedures. These responsibilities are also outline in the *Accounting Manual*, Division of Duties.[116] The Controller is supported by a Project Accountant who prepares the backup material for the financial reports although these responsibilities are not listed as part of her basic duties.

The lines of responsibility and accountability for financial reporting are clearly documented in the *Finance, Accounting & Logistics* organizational chart, PDs for the Finance Department positions and the *PPM*. Personnel in the Finance Department understood their roles and responsibilities associated with their position and have the necessary authority to accomplish their duties. Work performance evaluations of each staff are conducted periodically by the Controller to assess performance and ensure that each member has a full understanding of the responsibilities that are uniquely tailored to that position.

As NEON moves into the construction phase of the project, there will be a need to add additional F&A staff to address the increased oversight and compliance responsibilities. These additional positions have already been noted in the organizational chart in the *Accounting Manual* although the position titles in the "division of duties" do not correspond to the positions listed in the organizational chart. As mentioned previously, these discrepancies should be clarified to ensure staff are clear on their roles in the FR process.



[115] PPM section 3.7

[116] Accounting Manual Section 2

**PRACTICE 1.3.** The Awardee should ensure that financial reporting staff members receive continuing educational opportunities to allow them to successfully manage Federal awards.

NEON currently has a small financial management staff and training is determined on an individual basis. Currently, no formal training program is in place although continuing educational and training opportunities are available to employees to improve job skills. During the last three years, the Controller Office's staff members have completed a number of financial management courses, including Government Cost Principles, and other focused areas, ranging from Dynamics SL Users group training to procurement policy, in order to stay current in the requirements to manage Federal awards. Individuals in the office have participated in over 35 courses during this span.

NEON recently hired a Manager of Learning and Development who plans to develop a formal training program designed to address the needs of specific organizational functions. The CFO plans to make training a priority for the Finance, Accounting, and Logistics group and will have the training manager develop a syllabus for the Finance staff focusing on Federal cost principles and award management requirements. This will become increasingly important as new staff is hired to address the additional responsibilities for managing the NEON awards.

**PRINCIPLE 2. THE AWARDEE SHOULD HAVE ADEQUATE CONTROLS FOR PREPARING ACCURATE AND TIMELY CASH REQUESTS AND FEDERAL FINANCIAL REPORTS (FFR).**

**PRACTICE 2.1.** The Awardee should have documented policies and procedures related to the cash request and FFR preparation processes.

Policies and processes related to cash management and financial reporting outlined in the Finance and Accounting Section[117] of the *PPM* generally conform to Federal regulation and NSF requirements.

The Cash Management and Advances Section[118] of the *PPM* provide clear guidance on the cash management process. In preparing the weekly cash advance request, the Controller determines the total cash needs for activities for the upcoming week based upon scheduled accounts payable expenditures and payroll requirements. This analysis is performed utilizing a checkbook register for the Operating Account. Once the cash needs are determined, the Controller submits the transfer request, via e-mail, to the CFO who forwards it to NSF *via* FastLane. Funds received are directly deposited into an operating bank account and disbursed via Accounts Payable check and electronic funds transfer. A contingency balance of less than $10k is usually maintained. Details of this process were included as part of the supporting documentation for the samples.

[117] PPM Section 3
[118] PPM Section 3.4

General procedures on the FFR report preparation procedures are contained in the Financial Reporting[119] Section of the *PPM*. The Controller and the Senior Accountant understand the process and the reports reviewed as part of the samples accurately reflected the accounting information. However, the step by step processes used in the FFR preparation were not well documented. It is important to have documented procedures and to ensure that they are followed. This will facilitate consistency in practice and be helpful when the primary preparer is not available. Also, the procedures should specify the official who has the authority to submit the FFR in the absence of the CFO.

## PRINCIPLE 3. THE AWARDEE SHOULD HAVE AN ACCURATE CASH MANAGEMENT PROCESS.

**PRACTICE 3.1.** The organization should have a system in place to ensure proper advance payment or reimbursement requests from the sponsor.

NEON, Inc. has an accurate cash management process in place to record and distribute advanced payments. Policy guidance is found in the Cash Management and Advances Section,[120] of the *PPM* and its supporting practices detailed in the Cash Receipts[121] and Cash Disbursements[122] Sections of the *Accounting Manual*. Controls are in place to ensure that the cash handling responsibilities are segregated. Once the cash needs are determined by the Controller, a cash request is prepared for CFO submission through FastLane. The cash received is directly deposited into the NEON operating bank account and is processed through the accounting system by the Project Accountant. Voucher packets for payment are prepared and reviewed by the Controller for validity, accuracy and compliance with NEON's purchasing signatory authority policies before the checks are signed. Any issues that arise are resolved with the Accountants before the checks are sent out. Checks and wire transfers over $10K must also be signed by the CFO, COO, or CEO. The sampling review confirmed that the documented cash request process was being followed (Table 4).

Although NEON's cash management practices are generally compliant with the administrative principles, and certain requirements in the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Payment[123] subsection should be addressed. This Payment section requires that cash advances be limited to the minimum amounts needed and be timed to be in accordance with the actual immediate cash requirements in carrying out the purpose of the project. NEON's policies allow for a balance to be carried up to $10K. This balance should be minimized. Also, the Payment section requires that written procedures need to be in place to minimize the time elapsing between the transfer of funds and disbursement. Although, in

[119] PPM Section 3.8
[120] PPM Section 3.4
[121] Accounting Manual Section 5
[122] Accounting Manual Section 6
[123] 2 CFR 215.22

practice, funds received by NEON are distributed immediately upon receipt in accordance with NEON policy, there should be detailed policy explicitly identifying the distribution timeframe and the amount of residual balances retained. The *PPM* should be revised to address these A-110 requirements.

**PRINCIPLE 4. THE ORGANIZATION SHOULD HAVE A SYSTEM IN PLACE FOR ACCURATE AND COMPLETE FINANCIAL REPORTING THROUGH THE FFR.**

**PRACTICE 4.1.** The organization should have a system in place that identifies the link between the FFR amounts and the general ledger.

Written procedures are in place (Overview of Federal Reporting, FFR Reporting[124] in the *PPM*) and practices suggest that it is possible to identify the link between the FFR amount and the general ledger. The FFR financial information is prepared by the Controller or Project Accountant using data derived from the MS Dynamics accounting system. The system's coding convention allows NEON, Inc. to track all revenues and disbursements at the project level. The system has the capacity to identify the source and application of funds and contains information pertaining to Federal awards, authorizations, obligations, unobligated balances, assets, outlays, income, and interest. The system has two main modules: General Ledger and Project. The General Ledger captures revenue, expense, asset and liability data and adheres to Generally Accepted Accounting Principles (GAAP). The Project module tracks revenue and expense at the project level by grouping expenses by project, task and cost category.

The sample review confirmed that the amounts reflected in the supporting documentation could be traced to NEON, Inc.'s accounting records and the sampled awards reconcile (Table 5). Information from the system is used by the Controller to develop an award project summary report in Excel. The expenditure amounts are reconciled to the general ledger. This financial information is used by the Controller to populate the FFR report. The FFR is uploaded into FastLane and submitted to NSF by the CFO.

Guidance on the treatment of credits and interest are included in the *PPM* but policies and procedures to identify, record, and report program income are not. NEON, Inc. does not expect to receive program income under the NEON award. If this were to happen, the CFO indicated that the income would be recorded in the accounting system using the NEON award account keys and unique object code for revenue.

NEON, Inc. should develop policy guidance to identify, record, and report program income in accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Program Income subsection. Recipient organizations are required to account for program income related to projects supported with federal funds. This process should be documented in the NEON policies and reported quarterly on the FFR. These policies and procedures should conform to

124 PPM Section 3.8.2 (B)

the NSF FFR reporting requirements. Specifically, all program income received under an award, as well as supported expenditures, should be submitted on the FFR in the period in which the income was received. Previous FFR submissions did not reflect program income received from membership dues although these dues are defined as program income under the terms and conditions of the cooperative agreement and should have been reported.

**PRINCIPLE 5. THE AWARDEE SHOULD HAVE ADEQUATE CONTROLS IN PLACE FOR ACCESS TO THE FASTLANE FINANCIAL FUNCTIONS.**

**PRACTICE 5.1.** Responsibilities for access and permissions to the FastLane Financial Functions for FFR preparation and cash requests are controlled and segregated.

Permission to the FastLane Financial Functions is granted by the CFO based on the division of duties noted in the Matrix to Access Dynamics[125] in the *Accounting Manual*. A listing of NEON staff with FastLane accounts and permissions are included in Award Management, Purpose, Exhibit[126] Section of the *PPM*. Though both the CFO and Controller have authority to grant access to the Dynamics financial system based on job requirements, only the CFO and Controller can authorize permissions in FastLane. Further, only the CFO has the FastLane capability to submit cash requests and certify the FFRs. This provides for an appropriate segregation of duties.

The CFO confirmed that he reviews FastLane permissions periodically and makes updates to the system as necessary. However, detailed procedures on the process used for assigning and updating NSF FastLane permissions were not documented. Furthermore, we were not able to determine who had been delegated nor were procedures in place which identified the process delegated responsibility to grant FastLane permissions in the absence of the CFO.

The access and permission assignments should be routinely verified, and the results of the review documented.

**PRINCIPLE 6. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE TO ENSURE COMPLIANCE WITH THE TERMS, CONDITIONS, AND SPECIFICATIONS OF THE AWARD FOR FINANCIAL REPORTING.**

**PRACTICE 6.1.** The Awardee has procedures in place to monitor compliance with the award terms, conditions and specifications relevant to financial reporting.

Procurement and Contracts (P&C) has lead responsibility for distributing the award documents to NEON staff and monitoring compliance with the award terms and conditions. An award compliance matrix was developed by the P&C staff to assist them with this monitoring process. The CFO and Controller have specific FR compliance responsibilities as noted in the Award

125 Accounting Manual Appendix A
126 PPM Section 4.2.1 (B)

Reporting[127] Section of the *PPM*. NEON, Inc. reviews the financial terms and conditions when the award is received and prepare an F&A compliance checklist that is used quarterly to review compliance with the terms and conditions. The Controller's staff is well aware of their responsibilities.

It was confirmed that all financial reports required by the terms and conditions were submitted timely and in conformance with the reporting requirements. The FFRs samples reviewed during the site visit were completed accurately and consistent with the information in the accounting system. The quarterly ARRA reports were submitted on time to the Recovery.gov website consistent with policies outlined in the ARRA Specific Activities[128] of the *PPM*.

### 6.5.4 Results

Areas of Concern include:

FR-1: Develop written procedures for minimizing the time between transfer of funds from NSF and disbursement by NEON (*i.e.*, 3-4 days). In accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Payment[129] subsection, organizations operating on an advance basis must have written procedures to minimize the time between receipt of funds from federal agencies and payments to vendors/payroll. NEON needs to strengthen existing procedures to address Federal regulations. Although NEON has practices in place that result in minimal time between fund receipts and spending, procedures should be more clearly documented to specifically address the timing issue required by the administrative principles.

FR-2: Develop policy guidance to identify, record, and report program income in accordance with the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Program Income subsection. Recipient organizations are required to account for program income related to projects supported with federal funds. This process should be documented in the NEON policies and reported quarterly on the FFR.

Areas for Improvement include:

FR-3: Roles and responsibilities for all financial reporting activities should be clearly identified in the *PPM* and the *Accounting Manual*. These descriptions should reconcile against each other and correspond to the job titles for the respective position descriptions.

127 PPM Section 4.2.5
128 PPM Section 4.4.3
129 2 CFR 215.22

FR-4: Procedures and detailed step-wise methodology used to develop cash requests and FFRs should be documented. These should include information on specify the source of information used to calculate the cash request amount and the FFR totals.

FR-5: FastLane procedures for assigning the FL users access and, in particular, the financial functions, should be developed and documented. Procedures should include delegated responsibilities in the absence of the CFO and address segregation of FastLane functions to ensure that conflicts of interest are avoided.

Best Practices: None identified.

## 6.6 HUMAN RESOURCES

### 6.6.1 Scope

This portion of the review included an assessment of the administrative business systems and the organizational structure in place to support human resources for the Facility. The review evaluated these systems to confirm that prescribed written policies and procedures were incorporated, internal controls were in place, and the systems were capable of supporting the Facility. The scope also included an assessment of whether the systems in this core functional area are consistent with NSF expectations and explored the unique human resources challenges and issues that confront the Facility.

The review was refined. Select practices associated with the principles on non-discrimination and drug-free workplace were reduced in-scope. The principles and practices address written procedures associated with self-certification[130]. A review of compensation strategy was included.

It was determined that a desk review and a site visit were necessary.

### 6.6.2 Sources and Methods

- Awardee Participants: T. Beasley, J. Keller, R. Martin, Z. Rozsa and J. Waugh

The desk review involved assessing the information provided by the Awardee and the information obtained *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during the scope of this review.

A survey of Equal Employment Opportunity (EEO) complaints and grievances filed at the Awardee location by employees for the last three calendar years[131] was conducted to assess if there are signs of discrimination patterns (Table 7).



[130] Practice 2.1, 2.3, 2.4, 3.1, 3.3, 5.1
[131] Period covering from 2008 to 2010

**Table 7. Results of EEO Complaints and Other Grievances' Analyses**

| EEO Complaint or Grievance (Type) | Total Received (Number) | Adjudication (Determination)[1] |
|---|---|---|
| Age | 0 | NA |
| Disability | 0 | NA |
| Collective Bargaining | 0 | NA |
| Other Non-Collective Bargaining | 0 | NA |
| Marital Status | 0 | NA |
| Natural Origin | 0 | NA |
| Sexual Harassment | 0 | NA |
| Race | 0 | NA |
| Religion | 0 | NA |
| Sex | 0 | NA |
| TOTAL | 0 | NA |

NA= not applicable
[1]determination of whether complaint/grievance is in favor of employee or employer/Facility

#### 6.6.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE HR FUNCTIONS FORTHE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the human resource functions supporting the Facility.

Human Resources (HR) management structure and support is represented in the *NEON, Inc. Organizational Charts* and sub charts *(i.e.,* Human Resources*)*. It shows staff responsible for the major HR functions which include management of learning and development, payroll and HR information systems execution, recruiting, total rewards and benefits, and administrative activities as outlined in the written policies and procedures (*e.g., PPM and Medium-Term Business Plan*).

As shown in the *Organizational Charts*, the Chief of HR reports directly to NEON, Inc.'s CEO and to the Board of Directors in the absence of the current CEO who was scheduled to leave in August 2011. It also shows that she leads a team that consists of five managers, including the Payroll/HRIS Manager, the Administrative Services Manager, the Staffing Manager, Learning & Development Manager, the Total Rewards Manager, and a yet-to-be-filled Director of HR position. The lines of responsibilities and authorities are clearly presented though the current management structure described above is flat and top heavy.

**PRACTICE 1.2.** Roles and duties of staff members responsible for human resources for the Facility should be clearly assigned and defined.

The roles and responsibilities related to the duties and functional areas of individuals providing HR support for NEON, Inc. are described in multiple written documents including the *Domain Human Resources Strategy Plan, Salary Manual* and PDs. Only recently has the HR Department structure been clarified and hiring near complete, with only one position remaining to be filled. Because of this extended delay, the Chief of HR has had to take on multiples roles such as managing the day-to-day operations of each HR function while still developing organization-wide HR strategy plans with the CEO and Board of Directors. With competing job responsibilities the development of several strategic initiatives such as the NEON, Inc. Succession Plan and NEON, Inc.-Wide Training and Development Program has been delayed.

With the exception of the Total Rewards Director, all other senior positions within this Department have clearly defined PDs. A short description, extracted from the individual PDs follows in the list: (1) "The Director of HR Assists the Chief Human Resources Officer (CHRO)in the development and implementation of organization-wide strategy, policies and programs encompassing all aspects of human resource management including employment, employee relations, employee benefits, compensation, employee training, organizational development, employee assistance and regulatory compliance;" (2) "Payroll/HRIS Manager is responsible for overseeing, managing, and maintaining the Payroll Department. This position is also responsible for architecting, updating and maintaining the HRIS and Payroll System in accordance with all Federal, State and Local Laws relating to taxation, labor and benefits. This position reports to the Chief of Human Resources and has one or more direct report;" (3) "Under general supervision, the Staffing Manager is responsible for providing expert staffing services, strategic advice and counsel and acting as the primary subject matter expert on recruiting to NEON hiring managers and senior management. Also responsible for providing full-lifecycle recruiting support, delivering high-quality, professional candidates, and maintaining excellent relationships while guiding hiring managers and candidates through the selection process. Implements recruitment, staffing, and retention strategies that support business objectives. Provides guidance and direction to all aspects of the recruitment process including: job requisition design, sourcing, screening, pre-employment checks, compliance, offers of employment, and on-boarding; "and (4) "...the Chief of Human Resources, the Manager, Learning & Development will be responsible for managing the learning and development plans for the NEON Observatory including plan design, development, implementation, metrics and administration of company training programs for employees at various levels throughout the organization."

**PRACTICE 1.3.** The Awardee should ensure that HR staff members receive continuing educational opportunities to allow them to successfully support the large Facility.

The *Training Records for All Facility* document indicates HR staff has completed relevant courses related to their job functions (*e.g.*, Employee Self Service Orientation Training) and other general

compliance areas (*e.g.*, time card training). Staff should be encouraged to continue with these as well as pursue activities that will also enhance their professional development.

**PRINCIPLE 2. THE AWARDEE SHOULD HAVE MECHANISMS IN PLACE TO ENSURE THAT NO PERSON IS DISCRIMINATED AGAINST BASED ON RACE, COLOR, NATIONAL ORIGIN, SEX, OR HANDICAP.**

A limited review was conducted of the requirements associated with this principle. As NEON, Inc. does not have a written procedure explicitly detailing their self-certification process, a rough survey of related documentation (*e.g.*, NEON, Inc. *PPM, Diversity Commitment Letter from CEO* and *Employee Handbook*) was conducted and no immediate concerns were identified with their alignment with the requirements, though missing elements needs to be addressed. This also reinforces the need for NEON, Inc. to incorporate an assessment of the policies and procedures into its self-certification process when it is developed.

**PRACTICE 2.1.** The Awardee should have mechanisms in place to ensure applicants and employees are aware of the organization's nondiscrimination policies and practices.

NEON, Inc.'s *PPM* summarizes the organization's policies and procedures related to nondiscrimination. Its sections address broad issues such as diversity, hiring practices, employment practices as well as the organization's complaint resolution procedure.

**PRACTICE 2.2.** The Awardee should have mechanisms in place to train selection officials and managers in their responsibilities in complying with nondiscrimination policies and practices.

NEON, Inc. has recently hired a Manager for Learning and Development who will be responsible for developing a strategic approach to training. It does not appear that there are formalized requirements for training selection officials and managers on their associated responsibilities.

**PRACTICE 2.3.** The Awardee should have mechanisms in place to comply with specific nondiscrimination practices as described in relevant Federal regulations (e.g., making reasonable accommodations for people with disabilities and instituting policies and practices to resolve discrimination complaints).

*NEON, Inc.'s Employee Handbook* and the *PPM* collectively summarize organizational policies and procedures addressing mechanisms related to nondiscrimination.

**PRACTICE 2.4.** The Awardee should have mechanisms in place to assess its compliance with nondiscrimination policies.

The NEON, Inc.'s Diversity Policy is outlined in the Diversity Policy of the *PPM*,[132] explains the assessment process. As stated, "NEON is committed to continual assessment and evaluation. NEON's Human Resources Director is responsible for reviewing the diversity policy annually to ensure it is dynamic, continues to meet NEON's operational objectives and is reflective of the contemporary society and culture in which NEON operates. NEON's Chief Executive Officer (CEO) and Human Resources Director are responsible for reporting on the level of diversity within NEON. NEON will proactively inform and educate its staff on topics of diversity. Additionally, all other NEON policies and processes will be evaluated on a regular basis to ensure they do not intentionally or inadvertently discriminate against, disadvantage and/or exclude any individual(s) or group(s) of people."

No details are available to explain how the process will be carried out. These should be documented.

**PRINCIPLE 3. THE AWARDEE SHOULD HAVE MECHANISMS IN PLACE TO MAINTAIN A DRUG-FREE WORKPLACE.**

**PRACTICE 3.1.** The Awardee should have in place, and provide each employee engaged in the performance of the award, a published statement notifying employees of the requirements of the organization's policies and processes regarding a drug-free workplace.

A limited review was conducted of the requirements associated with this principle. NEON, Inc. does not have a written procedure explicitly detailing their self-certification process, and specifically its compliance with maintaining a drug-free workplace. A rough survey of related documentation (*e.g., NEON, Inc. PPM, Diversity Commitment Letter from CEO* and *Employee Handbook*) was conducted and no immediate concerns were identified with their alignment with the requirements, though missing elements needs to be addressed. This also reinforces the need for NEON, Inc. to incorporate an assessment of the policies and procedures into its self-certification process when it is developed.

**PRACTICE 3.2.** The Awardee should have processes and practices in place to respond to violations of the drug-free workplace policy.

NEON, Inc. outlines its drug-free workplace policy in the *Employee Handbook*. All employees are required to sign an acknowledgement form, which is part of the *Handbook* indicating that they have received, read, and will comply with the drug-free workplace requirements stated in the Drugs and Alcohol[133] and other related section. Throughout the *Handbook* there are clear statements reinforcing the Organization's stance that violations can results in terminations.

[132] PPM Section 1.3.1

[133] Employee Handbook Section 7.3

There are no published procedures to explain the stakeholders and process for addressing violations. This needs to be outlined and published as soon as possible.

**PRACTICE 3.3.** The Awardee should establish an ongoing drug-free awareness program.

While both the *PPM* and *Employee Handbook* both address NEON, Inc.'s policies related to drug-free awareness, it is not entirely clear what other steps or efforts are being carried out and how these reconcile with the requirements published in the NSF Grant Proposal Guide (GPG). An assessment of NEON, Inc.'s current policies should be reviewed and gaps addressed. The updates should be incorporated in the appropriate organizational documentation, and staff alerted.

**PRINCIPLE 4. THE AWARDEE SHOULD HAVE A HUMAN CAPITAL OR WORKFORCE PLAN IN PLACE TO ENSURE ITS HUMAN RESOURCES ARE ALIGNED TO CARRY OUT ITS MISSION.**

**PRACTICE 4.1.** The Awardee should have mechanisms in place to identify the type and amount of work as well as the type of workforce required (e.g., numbers and types of positions, workforce competencies, worker experience, educational/professional certifications) to meet the needs to support the large Facility.

The short-term staffing strategy for NEON, Inc. during construction is being executed as outlined in the HR *Strategic Plan* and as previously discussed and reviewed in Financial Design Review. To determine current staffing levels analytical tools were used to determine the number and type of people required, however no supporting documentation or further information was available to describe the tools used during the workforce planning exercises. As described by the Chief of HR, NEON, Inc. currently has 138 staff and 26 open staffing requisitions. Further she estimated that at its peak NEON, Inc. would grow to approximately 200 – 270 staff. This peak staffing level would be maintained during operations. The general and agreed-upon strategy prior to operations is that NEON, Inc. will revisit all positions hired for the construction phase. This will entail a recompetition of each position or a review of the incumbent in the position. NEON, Inc. should further develop its staffing strategy in preparation for NEON operations.

NEON, Inc.'s workforce planning model as described in the *Salary Manual*, consists of four steps, according to the HR *Strategic Plan*, including: 1) conducting a supply analysis by involving creating a current workforce profile and reviewing trend data; 2) providing demand analysis by identifying staffing patterns and anticipated workload and project changes; 3) carry out a gap analysis to determine future gaps (or surpluses) in the number of staff and identify changes in workforce demographics; and 4) developing staffing strategies which include recruiting, succession planning and employee training and development.

**PRACTICE 4.2.** The Awardee should have a process in place to identify gaps or surpluses in the workforce that may impede the Facility in accomplishing its mission and take the necessary steps to address the issues.

NEON, Inc. emphasized that training, development and professional growth is considered important to ensure the organization retains high quality staff throughout the construction period. Since hiring the new Learning and Development Manager, the HR Department has begun its plan to develop new NEON, Inc.-wide internal training program to support this position. According to the Chief of HR, the deadline for creating the organization-wide internal training program is September 30, 2011. While it is recognized that a long-term comprehensive training program is important and particularly helpful in keeping staff, HR should focus its initial training efforts on issues that are related to maintaining compliance such as timecard and credit card policies. This approach would also enable HR to complete other pending priorities and issues.

In addition to the NEON, Inc.-wide internal wide training program, the recently hired Learning and Development Manager and the Chief of HR are developing a succession plan. NSF requested that NEON, Inc. submit a succession plan on July 1, 2011 to address risk associated with departures or changes in C-level positions. This is overdue and should be addressed immediately. As described by NEON, Inc. during the site visit, delivery of the succession plan is lagging due to competing priorities (*e.g.*, organization-wide training program) and challenges associated with the departure of the current CEO who is scheduled to leave NEON, Inc. in August 2011.

In addition to the succession plan, HR is currently in the final stages of developing a Performance Assessment Program for NEON, Inc. staff as described during the site visit but no launch date has been set. Further there are no currently written policies and procedures to address this. This is critical as hiring, construction and operations ramp-up.

## PRINCIPLE 5. THE AWARDEE HAS POLICIES AND PRACTICES IN PLACE TO PROVIDE SAFEGUARDS TO ENSURE THAT THE INSTITUTION COMPLIES WITH LAWS AND REGULATIONS REGARDING RECRUITMENT, HIRING, AND EMPLOYMENT.

**PRACTICE 5.1.** The Awardee should provide mechanisms for employees to confidentially express concerns without fear of reprisal.

Personnel policies and procedures related to compliance with laws and regulations associated with recruitment, hiring and employment are outlined in the *PPM* and the *Employee Handbook*. Both documents are available to all NEON, Inc. and staff providing support to NEON. NEON, Inc.'s policy on prevention of retaliation, as described in the PPM expressly prohibits retaliation, including harassment, intimidation, adverse employment actions against employees who raise suspected violations of law, cooperate in inquiries or investigations, or identify potential violations of NEON, Inc.'s whistleblower policies. Further, the policy states

that any employee who engages in retaliation will be subject to discipline up to and including termination. For individuals who believe that he or she has been subjected to any form of retaliation as a result of reporting a suspected violation of law or policy, the process requires an immediate report on the retaliation be submitted to the CEO, the COO, the Director of HR, the employee's immediate supervisor, or a representative of the HR department. Supervisors, managers, and HR staff that receive complaints of retaliation must immediately inform the CEO, the COO, or the Director of HR.

Allegations of harassment, discrimination or retaliation will be investigated promptly, thoroughly and impartially according to the *PPM*. The investigation may include individual interviews with the parties involved and, where necessary, with individuals who may have observed the alleged conduct or may have other relevant knowledge. This process is also utilized to investigate workplace issues. A Complaint Resolution Procedure is used to resolve all employee concerns related to personnel matters. During discussions, NEON, Inc. indicated that an Ombudsman would be hired to informally facilitate and resolve employee disputes.

## OTHER REVIEW AREAS

***Compensation Strategy***

NEON, Inc's current salary structure is documented in the *Salary Manual*. It provides the organization's compensation strategy and identifies the job descriptions and salary grades associated with those positions. The *Salary Manual* covers details such as job summaries, job families, salary scales and grades. There is an ongoing concern, which was expressed, about the salary ranges and potential growth to the upper bounds of the existing scales. As currently adopted, the highest salary grade 19 has an upper bound of $482,024.

Salary growth toward and new hires in the upper ranges have the potential for significant impact on the NEON operations budget. This would not be sustainable. While the Chief of HR and COO noted that generally NEON, Inc.'s salaries are below the salary grade midpoints, they also emphasized that job market research and analysis was done to ensure that NEON, Inc.'s positions and salaries were comparable to other similar jobs. NSF also expressed concern that the analysis included comparisons with positions in the "for-profit" sector and suggested that the approach be revisited using only not-for-profit comparisons. There is no subsection in the *Salary Manual* used to describe the market research analysis conducted by HR. This should be developed in NEON, Inc. written policies and procedures.

### 6.6.4 Results

<u>Areas of Concern</u>: None identified.

Areas for Improvement include:

HR-1: NEON, Inc. should consider investigating other organizational structures for the improvement of HR operations. There may other organization arrangements that are more efficient and effective.

HR-2: NEON, Inc. should ensure that it addresses outstanding NSF-stated concerns and expectations related to the development of a succession plan.

HR-3: HR should outline a strategy to deliver training courses on high risk issues to all NEON, Inc. staff with the initial focus on required job functions and compliance concerns such as safety, travel and expense reporting, and procurement policy.

HR-4: NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with discrimination against persons based on race, color, national origin, sex, or handicap. Current practices are not structured and have resulted in select requirements not being addressed.

HR-5: NEON, Inc. should develop written procedures to demonstrate and validate a sufficient process for self-certification of its compliance with drug-free policies.

HR-6: While NEON, Inc. are planning strategies to manage their workforce, these are mostly short-term an informal in practice. More structured short and long-term workforce planning should be developed and written. It should include a consistent approach to aligning the workforce with NEON's mission and objectives.

HR-7: The staffing strategy for operations has been delayed due to changes in funding. NEON, Inc. should develop a model for more easily determining staffing levels under different funding scenarios. This would enable HR to better plan.

HR-8: The NEON, Inc. succession plan for C-level positions should be completed and submitted to NSF as expected.

HR-9: The Performance Assessment Program should be completed, documented and executed as soon as possible, within the next six months. This is especially important given the growth in staff during construction and need to maintain and retention the organization.

HR-10: NEON, Inc.'s compensation analysis should be reviewed to include market data from only not-for-profit organizations (*e.g.*, academic institutions, Federal and State Governments, and non-profits). NEON, Inc. should work with NSF Program to review the results and determine the appropriate next steps if excluding the "for profit" comparisons results in significant differences to salary ranges.

Best Practices: None identified.

## 6.7 PROCUREMENT

### 6.7.1 Scope

This portion of the review included an assessment of the procurement administrative business systems supporting the large Facility and the organizational structure in place to support these functions. The review evaluated these systems to confirm that prescribed written policies and procedures are incorporated, internal controls are in place, positive efforts are made to use businesses led by underrepresented groups, and that systems are capable of supporting the Facility. In addition, the review determined whether procurements are conducted competitively and whether detailed procurement records documenting the procurements and purchases are maintained. The scope also included an assessment of whether the systems of this core functional area are consistent with NSF expectations and compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that both a desk review and a site visit were necessary.

### 6.7.2 Sources and Methods

- Awardee Participants: L. Anderson and D. Pendleton

The desk review involved assessing the information provided by the Awardee and the information obtained *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during the scope of this review.

A master list of procurement actions[134] was provided by the Awardee. It included a variety of procurement actions covering the category types outlined Table 8. A representative sample of procurements was selected to assess the utilization of the procurement systems. For each sample, the source supporting documentation was examined against selected attributes, in Table 9, as appropriate for the procurement type. The results of the review are presented in and are outlined in Table 9 and Table 10.

[134] Period from February 2011 to June 2011

**Table 8. Summary of Selected Procurement Samples by Dollar Value**

| Category (Type)[1] | Item Value ($K) | Selections (Total Number)[1] |
|---|---|---|
| Subawards | x | 0 |
| contracts/purchase order | <5 | 3 |
| contracts/purchase order | ≥5 and <25 | 5 |
| contracts/purchase order | ≥25 and <250 | 3 |
| contracts/purchase order | ≥250 | 0 |
| credit card | <5 | 3 |
| TOTAL | | 14 |

**Table 9. Summary of Results from Procurement Analysis – Purchase Order**

| Type | File/ Doc No. | Vendor | Value ($K)[1] | Justification of Need | Flowdown Clause | Cost/Price Analysis | Sufficient Competition | Sole Source Justification | Basis for Award Selection | Appropriate Signatures Obtained | Debarment Check |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Purchase Order | 000999 | CIMEL Electronique | 41.2 | OK | OK | OK | OK | NA | OK | OK | OK |
| Purchase Order | 001000 | University of Arizona | 9.95 | OK | OK | OK | OK | NA | OK | OK | OK |
| Purchase Order | 001057 | OfficeScapes | 7.66 | OK | OK | OK | OK | NA | OK | OK | OK |
| Purchase Order | 001060 | Boulder Engineering Studio, LLC | 10.0 | OK | OK | OK | OK | NA | OK | OK | OK |
| Purchase Order | 001264 | Redstones Land, LLC | 241 | OK | OK | NA | NA | OK | OK | OK | OK |
| Purchase Order | 001346 | Hewlett-Packard Company | 8.56 | OK | OK | OK | OK | NA | OK | OK | OK |
| Purchase Order | 2023 | Labsphere | 68.8 | OK | OK | OK | OK | NA | OK | OK | NIF |
| Purchase Order | 2057 | Schmidt Enterprises | 3.60 | NIF | OK | OK | NA | NA | NA | OK | OK |
| Purchase Order | 2247 | Grainger, W.W. | 12.6 | NIF | OK | OK | OK | NA | NA | OK | OK |
| Purchase Order | 2251 | B&H Foto | (3.12) | OK | OK | OK | NA | OK | OK | OK | OK |
| Purchase Order | 2319 | Insight | (3.85) | OK | OK | OK | NA | OK | OK | OK | OK |

OK = meets review requirements; NIF = documentation not in file; INSUFF= file documentation does not meet requirement; NA = not applicable [1]values have been rounded

**Table 10. Summary of Results from Procurement Analysis – Credit Card**

| Type | File/Doc No. | Vendor | Value ($K)[1] | Card Threshold | Support Documentation | Approval/ Signature | Allowable, Allocable, Reasonable |
|---|---|---|---|---|---|---|---|
| Credit Card | ER2455 | Jon Etra | 9.42 | OK | OK | OK | OK |
| Credit Card | WEE2850 | Wee Total | 0.48 | OK | OK | OK | OK |
| Credit Card | NAGAR2855 | Nagar Total | 21.4 | OK | OK | OK | OK |

OK = meets review requirements; NIF = documentation not in file; INSUFF= file documentation does not meet requirement; NA = not applicable [1]values have been rounded



#### 6.7.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE PROCUREMENT FUNCTIONS OF THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the procurement functions supporting the Facility.

The Procurement &Contracts (P&C) Department within the CFO's office negotiates and executes all procurement activities for NEON, Inc. in support of the construction and operations of the NEON Facility. The management structure for P&C is clearly articulated within the *Procurement and Contracts Guidance Manual (PCGM)* and PDs, although the positions are not aligned with the *NEON, Inc. Organization Chart.*

The lines of authority and responsibilities of P&C staff are illustrated in the *NEON, Inc. Organizational Charts*, the *PCGM* and the *NEON Organization Plan*. Collectively these documents provide an integrated view and a description of the relationships P&C manages internally within the CFO Organization and across the NEON project to ensure Project Managers are receiving necessary acquisition and contract support. As outlined on the *NEON, Inc. Organizational Charts*, P&C staff positions currently supporting PR functions for NEON, Include the Director of Procurement and Contracts, the Assistant Director of Procurement, a Senior Buyer and a Contract Specialist. During the site visit, P&C announced they recently made three new hires to their team which included a Senior Contracts Administrator and two Contract Administrators to administer the increase in new acquisitions and contracts for the construction phase of the Facility.

**PRACTICE 1.2.** Roles and duties of staff members responsible for procurement for the Facility should be clearly assigned and defined.

The responsibilities appear to be well-articulated in their written procedures and policies (*PPM, PCGM* and PDs). The P&C staff is clearly aligned within the CFO organization and actively

interfaces with the other departments (*e.g.*, Finance and Logistics on procurement specifications for long lead items, complex procurements that may require market research or construction evaluation criteria which are consistent with the annual acquisition plan).

Per the *NEON PPM* and *PCGM*, staff members have the delegated authority to accomplish their duties. Authorities of P&C staff are designated by position or function in the Signatory Authority[135], as well as throughout the *PCGM* including, Delegation of Procurement Contracts Authority.[136]

NEON project staff coordinates almost every procurement function with P&C in order to obtain any good or service which is above the credit card threshold of $1,000. The processes from procurement planning for large or sole source acquisitions 60 days in advance of receiving the actual requisition, to developing the solicitation package, to evaluating quotes and offers, to contract administration including accepting deliverables, to processing invoices, finally to closing out of the acquisition are clearly outlined in the *PCGM* and *PPM*. Each one of these PR functions requires coordination with the responsible P&C staff member.

**PRACTICE 1.3.** The Awardee should ensure that procurement staff members receive continuing educational opportunities to allow them to successfully support the large Facility.

Specialized training is emphasized for all members of the P&C staff. Training records indicate P&C staff has completed courses on managing Federal contracts and cooperative agreement, construction contracting, managing supplier diversity as well as attending National Association of Procurement Managers to remain competent in their core functional area. HR, the CFO and P&C management encourages and will fund staff to attain CCCM and CPCM certifications. Plans are underway for the New Manager of Training and Development to develop a focused training curriculum for all members of the P&C staff.

The P&C staff have developed an in-house training curriculum on procurement procedures for new NEON employees and conduct an annual refresher as outlined in the *PCGM*[137]. P&C staff conduct ad hoc training sessions for NEON staff as changes in policy occur.

**PRINCIPLE 2. THE AWARDEE SHOULD HAVE ADEQUATE CONTROLS FOR PROCUREMENT ACTIONS.**

**PRACTICE 2.1.** Procurement responsibilities are segregated from the office requesting and accepting the deliverable and from the financial management responsibilities.

NEON's procurement responsibilities are appropriately segregated. *NEON, Inc.'s Organizational Charts, NEON Organization Plan* and *PPM* indicate discrete lines of authority between the duties

[135] PPM Appendix E
[136] PCGM Document C2
[137] PCGM Document C1

of Finance and P&C while maintaining appropriate checks and balances. *PCGM* clearly identifies the P&C as separated from NEON's other internal customers and remains autonomous in its ability to complete its mission unhindered from other functions, such as receiving and accounts payable, to avoid any internal control conflicts. In addition, the *PCGM* also clearly restricts the CFO and CEO from authorizing their own procurements. In the samples reviewed, the delegation of authority was managed correctly. The review also confirmed that sufficient time was available to P&C staff to review the procurement requests, solicit adequate sources, and issue awards appropriately.

**PRACTICE 2.2.** Controls should be in place to ensure that approval thresholds are appropriate and related delegations of authority are not exceeded without authorization.

The P&C Director is authorized to sign any award document for Leases, Acquisitions, and Subawards without regard to dollar limit. He is also authorized to delegate this authority. The Senior Buyer and the Senior Contract Administrator are authorized to make procurements up to $50K and $250K respectively. The Procurement office has a credit card threshold of $30K. For small purchases, NEON also has an established Credit Card Program which is managed by the Finance Department.

The procurement module in the Maximo system has certain controls in place to ensure that approvals are obtained and related delegations of authority are not exceeded. The Signatory Authority in the *PPM's*[138], is the policy document that provides the Board's approval for the P&C Director to enter into contracts binding NEON and, within his discretion, to further delegate this authority. This procedure sets forth the approved delegations and sub-delegations of contract signature authority to various administrative officials for contracts on behalf of NEON. Names, staff titles, and procurement level authority are listed in the State of Colorado Participant Agreement.[139] The Delegation Authority[140] of the *PCGM* reaffirms the authority and is consistent with the *PPM*. During on site discussion it was learned that staff outside P&C had delegated authority to enter into Facility lease agreements for the sites. The parameters of this authority should be identified and referenced in the appropriate policy documents. The review of the sampled files (Table 9) confirmed that the correct approvals were used in all cases.

**PRACTICE 2.3.** Written Standards of Conduct should be maintained as required by 2 CFR 215.42 "Codes of Conduct."

The *PPM* provides detailed guidance and standards for all of NEON staff regarding Conflict of Interest (COI) activities and relationships within the Human Resources, Human Resources Policies, Conflict of Interest[141] section of the *PPM*, "Conflict of Interest", mirrors all pertinent Federal Government requirements. Each procurement staff authorized to make acquisitions

[138] PPM Appendix E
[139] PCGM Appendix E
[140] PCGM Document No C2
[141] PPM Section 1.1.3

signs an annual statement of compliance acknowledging that they are aware of the institutional standards of conduct. However, the procedures do not address the process that should be followed if a COI were identified. This should be addressed. As staff increases and duties expand, there may be benefit, particularly for the P&C staff, to have these requirements reiterated in an annual training program to ensure fully understanding of these requirements.

## PRINCIPLE 3. THE AWARDEE SHALL ESTABLISH WRITTEN PROCUREMENT PROCEDURES IN ACCORDANCE WITH 2 CFR 215.44 "PROCUREMENT PROCEDURES."

**PRACTICE 3.1.** Written policies and procedures should have a provision to avoid the purchase of unnecessary items.

Provisions are in place to avoid the purchase of unnecessary items as outlined in the Procurement and Contracts, General Procurement Guidelines, Purchase of the Necessary Items[142] section of the PPM. This requires the procurement staff to review expenditures for necessity, and the policy clearly prohibits unnecessary purchases. It adds guidance for requestors to consider doing analyses for "Make or Buy" and/or "Lease versus Purchase" arrangements. The Sample Purchase Requisitions and Sample Purchase Order[143] of the *PCGM* requires that the purchase requisition package contain a statement from the requestor that the item being procured is necessary for the project before a PR may be issued for the item or services. The purchase requisition must be reviewed and approved by a department supervisor before it is forwarded to P&C for processing. The supervisor is required to ensure that the requested procurement is necessary and the statement included. There is no dollar threshold for this required certification.

Adequate justifications were included in all of the sample procurements reviewed (Table 9).

**PRACTICE 3.2.** Written policies and procedures should require, where appropriate, an analysis of lease and purchase alternatives to determine which would be the most economical and practical procurement for the federal government.

The General Procurement Guidelines section of the *PPM*[144] provides general guidance to staff on Lease versus Purchase decisions with more specific processes and procedures detailed in the *PGCM* Equipment Lease or Purchase.[145] The *PCGM* also includes examples of some basic analysis requirements for some theoretical purchases which is helpful. However, NEON, Inc. may want to consider incorporating OMB Circular A-94 into the *PCGM* for determining whether to lease or buy. The circular takes the Lease versus Buy evaluation to a higher level of consideration and analysis. Given the large acquisitions starting in FY 2012, the enhanced guidance could prove to be useful.

[142] PPM Section 4.1.2 E
[143] PCGM Document G5
[144] PPM Section 4.1.2 G
[145] PCGM Document I2

One of the steps in NEON's lease-buy process is to issue a solicitation which appears to be for obtaining costs for the lease versus buy analysis. While Requests for Information (RFI) are appropriate for obtaining pricing information, there should be a statement on the RFI solicitation that the issuance is for information gathering purposes only and that no award will be made as a result of this RFI. Requests for Proposals (RFPs) are the instruments that should be used for selecting a vendor after the decision has been made that there is a necessary requirement to be purchased. RFPs are costly exercises for vendors to go through and should not be used for information gathering.

**PRACTICE 3.3.** Written policies and procedures should require standards for solicitations for goods and services.

Various Documents in the *PCGM* provide standards that are expected to be used by NEON, Inc. in developing solicitations. Statement of Work[146], Specifications and Purchase Description provides requestors and procurement staff an extensive discussion on the rationale for clear concise specifications, examples of types of specifications (functional/performance and detailed specifications), and the process used to expand "Brand Name or Equal" specifications to functional performance descriptors, so that potential offerors other than the Brand Name offeror will have a clear understanding of NEON, Inc's requirements. Solicitations, Evaluations, and Award of Quotations,[147] requires that NEON, Inc. staff notify offerors and quoters of the basis for award. The *PCGM* specifically states that vendors are not entitled to the relative importance of the factors although this is inconsistent with Federal competitions. NEON, Inc. should consider providing relative factors to ensure that vendors will focus on the areas where they need to place emphasis.

Oral solicitations procedures in the PCGM[148] require that procurement staff use a low-price; technically-acceptable method for making selections for purchase orders up to $30,000 in value. *PCGM*, Best Value Procurement[149], discusses, as a corollary, the selection methodology for written solicitations of choosing "the lowest price, technically acceptable" offer. Both oral and written solicitations require the procuring official to establish what is acceptable in order to meet NEON, Inc.'s requirement. Further policy statements and directions are included for Brand Name or Equal solicitations,[150] use of the metric system,[151] and Recycled Products.[152]

[146] PCGM Document G3
[147] PCGM Document G10
[148] PCGM Document G9
[149] PCGM Document E4
[150] PCGM Document E3
[151] PCGM Document I4
[152] PCGM Document J15

The procurement files should include documentation of solicitations and quotes that adhere to standards described in Procurement Procedures[153] and to the Awardee policies and procedures. The Procurement Compliance and File Checklist in the *PCGM*[154] require that files be maintained for every acquisition. The File Checklist[155] further requires that the documentation be both in paper hard copy and electronic format for all pertinent procurement files in accordance with the procurement standards. It specifically identifies the Contract Administrator/Buyer to appropriately document the procurement file. The implementation of the policies appears to require some improvement or additional monitoring and oversight. For example, while sampling the hardcopy purchase orders there were documents missing in the hardcopy file but were contained in the electronic systems (Table 9). The three new P&C staff members in this Department should be fully capable of ensuring all required records and supporting documentation are maintained both electronically and in hard copy format.

**PRINCIPLE 4. THE AWARDEE SHOULD ENSURE THAT PROCUREMENTS ARE COST EFFECTIVE AND HAVE BEEN COMPLETITIVELY SELECTED.**

**PRACTICE 4.1.** Cost or price analysis should be performed and the basis for the cost or price should be documented in every file.

The Price and Cost Analysis/Determination of Price Reasonableness outlined in the PGCM requires that a determination of price reasonableness be documented for every procurement. Guidance is provided to assist P&C staff in making this determination. Different approaches are described including, for example, use of competitive quotes/offers to in-house developed price estimates where there may not be multiple quotes. The Solicitation, Evaluation & Award of Quotations outlined in the *PCGM* encourages contract personnel to use best value procedures. Price and other non-price factors, such as past performance and quality, are used for appropriate larger procurements. The Solicitation, Evaluation & Award of Quotations outlined in the *PCGM* also contains additional factors that should be considered in the selection process. Cost analysis is also discussed directing the procurement staff to analyze the cost components, specifically, labor, materials, equipment, overhead, and profit to ensure that the costs is reasonable.

Sampled files reviewed included documentation to support the cost/price analysis (Table 9Table 10).

**PRACTICE 4.2.** Procurements should provide full and open competition in contractor selection, in compliance with 2 CFR 215.43.

NEON's policy is documented in the Extent of Competition in the *PCGM*, which promotes open and free competition to the greatest extent possible. There is an acknowledgment that resulting

[153] 2 CFR 215.44
[154] PCGM Document Nos. G16 and G17
[155] *Ibid*

benefits from following this policy include potentially better prices, better quality, and faster delivery schedules along with prescriptions for developing requirement statements that attract competitive bids. The Document reiterates statutory and regulatory requirements which promote competition and set standards for purchasers who would wish to pursue limited competitions. If competition were to be limited, the Extent of Competition in the *PCGM* requires a well-documented justification for all single-source acquisitions above $5K, signed off at ever higher management levels as the dollar value of the procurement increases.

The "Rule of Three" is NEON, Inc.'s criteria for competitions no matter the dollar amount of the award. NEON seeks three offers for each competition. Even though there is no conflict with OMB Circular A-110 or the Cooperative Agreement terms and conditions, this rule may not be effective when applying to large acquisitions which NEON will soon be conducting. Seeking additional offers can bring down prices and increase the likelihood of obtaining a better technical approach.

**PRACTICE 4.3.** The basis for contractor selection should be documented.

The Hard Copy and Electronic Filing section of the *PCGM* states that "all procurements be documented" and prescribes how and what is retained in each procurement file. The details of the required elements necessary for the basis of each selection methodology are specified. The methodology used is summarized on either the short or long form procurement summary in the file.

The sample procurement files reviewed included documentation to support the selection of the contractor and addressed the factors that were considered such as quality, availability, and past performance.

**PRACTICE 4.4.** The Awardee's contracting methods do not allow contract types that are precluded in federal procurements nor awards to parties that have been excluded from receiving federal procurements.

P&C staff follow internal guidance procedures to ensure that appropriate contracting instruments are used and the prospective contractors are not suspended or debarred. The *PCGM* Preface includes a cross references guide between NEON policies and procedures and those cited in Purpose of Procurement Standards.[156] Written Procedures[157] prohibits recipients of Federal funds from using cost-plus-a-percentage-of-cost and "percentage of construction cost'" types of contracts which are emphasized in *PCGM*[158], Consideration of Contract Types. However, the text does not directly identify the "percentage of construction cost" as a prohibited type of contract. This oversight is somewhat remedied in the General Procurement

[156] 2 CFR 215.40-48
[157] 2 CFR 215.44 (c)
[158] PCGM Document G4

Guidelines section of the *PPM,*[159] which identifies both types of contracts as being prohibited. The listing in G4 should be revised to include the "percentage of construction cost" as a prohibited contract type.

As part of their pre-award oversight review, P&C staff access the General Services Administration's online Excluded Parties List System to verify that the potential vendor/contractor is not suspended or debarred before a contract is executed. This verification is documented by P&C in the hard copy procurement files for all procurement contracts over $25,000. A Debarment and Suspension clause is incorporated into each contract, consistent with *PCGM,* Document No. F3 Debarment and Suspension, requiring each contractor to certify that they are eligible to negotiate with the government.

**PRINCIPLE 5. THE AWARDEE SHOULD ACTIVELY SEEK DIVERSE RESOURCES FOR PROCURING AND ACQUIRING GOODS AND SERVICES.**

**PRACTICE 5.1.** Staff who request and approve procurements should be encouraged to procure from small, minority-owned, disadvantaged, and/or woman-owned businesses.

Policies are in place to encourage staff to seek under-representative businesses when awarding contracts. For example, the Small, Minority Owned, Business Owned Objectives[160] outlined in the *PCGM* discusses the need and desire of NEON, Inc. to enter into contracts and Purchase Orders with underrepresented owned businesses (*e.g.,* Women and Minority-Owned Small Businesses). The P&C staff also has information available on how to determine an underrepresented vendor. The Small, Minority Owned, Business Owned Objectives[161] outlined in the *PCGM* provides staff guidance on utilizing under-represented firms and encourages staff to contact the local Chambers of Commerce, Small Business Advocacy groups and the Small Business Administration to identify the potential vendors in the local area.

Although the policies on these goals are in place, there is little indication that they have had a substantial effect on increasing participation of under-represented groups. There was no evidence to demonstrate that these goals have been pursued. Further, significant goals were lacking in NEON's Subcontracting Plan. The initial goal level in 2010 was between one and two percent of NEON, Inc.'s total procurement dollars with a planned growth to only five and six percent in 2014. During discussion, the Director P&C indicated that he would develop a Small Business Plan and renew his contact at the Chamber of Commerce in order to increase diverse resources to support the construction phase of the project.

**PRINCIPLE 6. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE FOR CONTRACT ADMINISTRATION TO ENSURE CONTRACTOR COMPLIANCE WITH THE TERMS,**

[159] PPM Section 4.1.2
[160] PCGM Document F2
[161] *Ibid*

**CONDITIONS, AND SPECIFICATIONS OF THE CONTRACT AND TO ENSURE ADEQUATE AND TIMELY FOLLOW-UP OF ALL PURCHASES.**

**PRACTICE 6.1.** The Awardees should have a process to evaluate subcontractor performance and document, as appropriate, whether or not the subcontractors met the terms, conditions, and specification of the subcontract.

NEON recently implemented a contract management module in the Dynamics SL system to provide the P&C staff with the ability to create and track cradle-to-grave contracts and agreements. The system allows staff to review budgets and schedule impacts before the work proceeds, streamline modification and change order approvals to reduce the risk of unauthorized work, manage compliance control documents (drawings, permits, proof of insurance, performance bonds), and monitor subcontractor performance. Extensive training has been provided to staff on the system features.

The Contract Administration[162] document outlined in the *PCGM* includes procedures related to breaches, disputes, liquidated damages, and termination if any of these situations were to occur. Guidance is also provided on contractor performance assessments. One of the assessment controls requires that the responsible P&C staff member assure that invoices are processed properly. However, there were no details on the mechanics of how this should be done. Desktop procedures should be developed to ensure that invoices are reviewed and approved by the technical director, P&C CA and Finance in accordance with appropriate criteria and processed appropriately.

Adequate closeout procedures are in place to certify that the work has been completed and all deliverables received. The Post-Subaward Monitoring, Close-Out[163] section of the *PPM* requires that a Subaward generally be closed-out within 60 days after its expiration date. Appendix K - Contract/Agreement Closeout Form[164] outlined in the *PPM*, is a check off sheet addressing all items that should be considered such as de-obligating funds, receipt of final reports, and property disposition. The Subaward Closeout[165] document in the *PCGM* provides clarifying instructions over the PPM. There were no closed agreements included in the sample analysis.

**PRINCIPLE 7. APPROPRIATE FLOW-DOWN PROVISIONS SHOULD BE INCLUDED IN ALL PROCUREMENTS.**

**PRACTICE 7.1.** Policies and procedures include the requirement to flowdown the appropriate provisions.

The standard NEON general terms and conditions include the required flow down provisions identified in the NSF Cooperative Agreement terms and conditions. The Federal and

[162] PCGM Document H1
[163] PPM Section 4.4.4 (E)
[164] PPM Appendix K
[165] PCGM Document D6

Regulatory Flowdown References[166] section of the *PCGM*, lists fifteen mandatory flowdown clauses and certifications that should be added to NEON's subcontracts. Given the upcoming amount of construction and equipment purchases necessary for the next phase, it was critical to see such clauses as the Davis-Bacon, Copeland Anti-Kickback, Buy American Acts as mandatory flowdowns. However, the listing is not comprehensive. All required flowdown clauses and provisions which are discussed in *PPM* and *PCGM*, including ARRA requirements, should be included in the Federal and Regulatory Flowdown References section.

All contracts in excess of the small purchase threshold should contain contractual provisions allowing for administrative, contractual, or legal remedies when the contractor violates or breaches contract terms. The Breaches and Dispute Resolution[167] document in the *PCGM* requires that each subcontract valued at or above $100K add a clause which allows NEON, Inc. to terminate that award for default under the conditions described within the clause. However, there was no similar requirement or prescription for Terminating for Convenience. The prescription provided in the Termination for Convenience[168] outlined in the *PPM* should be included in the NEON General provisions. The termination clauses for cause and convenience are of particular importance for NEON, Inc. as it approaches the Construction Phase. Not only will contract dollars increase dramatically but construction contracts are often fraught with Claims, Stop-Work Orders, Contract Deficiency Reports, Delays, etc. The importance of including the proper clauses as a basis for remedies cannot be overstated. Construction is a very litigious activity with a high risk factor.

The sample review confirmed that appropriate flowdown provisions, consistent with the NSF Cooperative Agreement terms and conditions, were included in the subcontract agreement files that were reviewed (Table 9).

**PRINCIPLE 8. AWARDEE SHOULD HAVE POLICIES AND PROCEDURES IN PLACE TO ADDRESS THE REQUIREMENTS OF THE SPECIFIC TERMS AND CONDITIONS OF THE NSF COOPERATIVE AGREEMENT RELATED TO PROCUREMENT AND SUBAWARDS.**

**PRACTICE 8.1.** Awardee procurements should adhere to the specific cooperative agreement terms and conditions related to procurements and subawards.

The processes and actions necessary to comply with procurement and subaward-related terms and conditions of the cooperative agreement are documented in NEON's *PPM*[169] and *PCGM*.[170] The PCGM[171] include the following subsections: 1) Determining Subaward and Procurement

[166] PCGM Section J
[167] PCGM Document H2
[168] PPM Section 4.1.2 (BB)
[169] PPM Section 4.1 (A) (B)
[170] PCGM Document G15
[171] PCGM Document D1

Contract, 2) Subaward Selection, 3) Award Administration and Monitoring, 4) Subrecipient Audit Requirements, 5) Subrecipient Risk Monitoring, 6) Cost Allowability by Subrecipient Entity, 7) Subaward Closeout, and 8) Record Retention. The guidance in these sections focuses on meeting the rolled down requirements of the cooperative agreement. NEON, Inc. During the BSR site visit meetings with P&C, NEON, Inc. confirmed that they only executed one subaward to Science and Engineering for $10 million and the subaward followed all of the terms and conditions outlined in NEON, Inc.'s policies and procedures.

#### 6.7.4 Results

Areas of Concern: None identified.

Areas for Improvement include:

PR-1: P&C should develop a tracking process to ensure proper checks and balances are maintained in practice as outlined in the *PPM* and *PCGM*.

PR-2: Include all individuals with delegated authority to enter into lease agreements into the Approval Authority matrix.

PR-3: Conduct annual training sessions for P&C staff to reiterate the Standards of Conduct policy and the Conflict of Interest requirements.

PR-4: Given the large amount of construction planned during the near future and the wealth of minority-owned firms and small business in the construction trades, NEON should revisit their five year goal and develop a plan to actively seek under-representative participation.

PR-5: Develop desktop procedures for the review and approval process for all subcontract invoices to ensure that the contracted work effort is consistent with the criteria established in the contractual agreements.

PR-6: Include all required flowdown provisions that are identified in the *PPM* and *PGCM*, including the termination for convenience clause, as part of the Federal Regulatory Flowdown References[172] section in the *PCGM*.

PR-7: Ensure that practices and procedures outlined in the *PPM* and *PGCM* for subaward monitoring activities are followed. NEON has had limited opportunity to put these policies and procedures into practice but are encouraged to ensure that these will be followed. For example, P&C should develop a form to collect information from subrecipients' A-133s.

Best Practices: None identified.

[172] PCGM Section J

## 6.8 PROPERTY AND EQUIPMENT

### 6.8.1 Scope

This portion of the review included an assessment of the property and equipment administrative business systems supporting the large Facility and the organizational structure in place to support these functions. It included a review of the Awardee's process for acquiring and managing inventory and for disposing of nonexpendable property purchased with NSF funds. The review evaluated these systems to confirm that prescribed, written policies and procedures are incorporated, internal controls are in place, and the systems are capable of supporting the Facility. The scope also included an assessment of whether or not the systems of this core functional area are consistent with NSF expectations and compliant with the terms and conditions of the NSF award.

The review was not refined.

It was determined that both a desk review and site visit were necessary.

### 6.8.2 Sources and Methods

- Awardee Participants: G. Faas

The desk review involved assessing the information provided by the Awardee and collected *via* teleconference with Awardee staff. Additional information was gathered through discussions during the site visit. Appendices B and C contain a list of supporting documentation gathered during this review.

Testing was performed on a sample of three assets judgmentally selected from the most recent inventory report which identified government-funded property acquired by transfer or purchase. Samples were selected based on a variety of dollar values, types, and locations. The number of assets selected for each value category is summarized in Table 11. A list of attributes used to analyze each sample is outlined in Table 12. Summary of Property/Equipment Review Results along with the results of the review.

**Table 11. Summary of Property/Equipment Assets by Value**

| Asset Value ($K)[1] | Total Selected (Number) |
|---|---|
| < 5 | 3 |
| 5 – 49.9 | 7 |
| 50 – 99.9 | 0 |
| 100 – 500 | 0 |
| > 500 | 0 |
| TOTAL | 10 |
| [1]values have been rounded | |

**Table 12. Summary of Property/Equipment Review Results**

| Tag No. | Acquisition Value ($K)[1] | Acquisition Date (mm/dd/yy) | Location Consistent w/Inventory Report | Property Maintained and Safeguarded | Verification of Physically Inventoried in Last 2 Years | Verification of Tag Indicating Title | Inventory Report Information Consistent with Records | Adequate Back-up Documentation |
|---|---|---|---|---|---|---|---|---|
| 21-00000 | $7,995 | 07/12/2010 | OK | OK | NA | OK | OK | OK |
| 21-10001 | $5,180 | 04/01/2010 | OK | OK | NA | OK | OK | OK |
| 21-00002 | $9,995 | 11/22/2010 | OK | OK | NA | OK | OK | OK |
| 21-50008 | $1,800 | 11/05/2010 | OK | OK | NA | OK | OK | OK |
| 21-50007 | $3,918 | 06/28/2010 | OK | OK | NA | OK | OK | OK |
| 21-50009 | $19,900 | 11/15/2010 | OK | OK | NA | OK | OK | OK |
| 21-00012 | $12,990 | 11/30/2010 | OK | OK | NA | OK | OK | OK |
| 21-00020 | $6,249.19 | 02/15/2011 | OK | OK | NA | OK | OK | OK |
| 21-00021 | $3,225.51 | 02/15/2011 | OK | OK | NA | OK | OK | OK |
| 21-00000 | $7,995 | 07/12/2010 | OK | OK | NA | OK | OK | OK |

OK = meets attribute requirements; INSUFF= documentation in file does not meet requirement; NA= not applicable; NIF = documentation not in file [1]
[1] Values rounded

### 6.8.3 Observations

**PRINCIPLE 1. A MANAGEMENT STRUCTURE SHOULD BE IN PLACE TO CARRY OUT THE PROPERTY AND EQUIPMENT FUNCTIONS OF THE FACILITY.**

**PRACTICE 1.1.** The Awardee should have a clearly defined management structure that has direct responsibility for the property and equipment functions supporting the Facility.

NEON, Inc. Property and Equipment (PE) administration is centralized under the CFO's Logistics group with support from the Controller and Procurement and Contract (P&C) departments. The Logistics Manager and his staff are responsible for asset receipts and inventory control. The Logistics Manager oversees the property management aspects of the asset, i.e. physical accountability, tagging, inventory control, and disposition. He is supported by the Warehouse Supervisor and Assistant who are responsible for receiving the assets at the central HQ warehouse and recording the asset into in the Property Management System (PMS) that is planned to be entirely within the Maximo system that will be interfaced with MS Dynamics through several manual and automated processes. The Office of the Controller provides support for the fiscal control of the assets including accounting records, periodic audits, and updates to the capital asset accounting process. Capital asset accounting will be accomplished through downloads of capital assets from the Maximo system into Excel, where

information can be sorted, depreciation calculated, and journal entries prepared as necessary to comply with the US GAAP. A designated accountant on staff supports this function. The Director of P&C, with support from a senior contract administrator and a group of Buyers, handles the acquisition process to obtain the asset.

There were no specific references to the property management function on any of the organizational charts (*i.e., NEON, Inc. Organizational Charts, Finance, Accounting, and Logistics chart*) although this was not a problem. Within the organization, it was understood that the CFO group was responsible for accounting, logistics and the warehouse, including property management. All activities are centralized at HQ. There is currently only a limited inventory to monitor and Logistics works with the PIs and the departmental administrators for day to day accountability.

With the advent of the construction phase, new equipment will be purchased and distributed to remote sites. The distribution of equipment away from HQ will require additional monitoring resources and coordination. NEON, Inc. has already anticipated this need and has a proposed hiring plan in place to coordinate property oversight roles. The Controller's Office plans to post a Capital Asset Accounting position to monitor the asset on the financial records and Logistics will post a Property Specialist who will have primary responsibility for the property management process and work with designated domain property administrators at remote sites for property oversight. At the current time, PDs for these positions were not available although the functional responsibilities and new position titles have already been posted in *PPM*. These PE functions are currently being filled by the Controller and the Logistics Manager respectively. NEON needs to ensure that sufficient staffs with defined purpose are hired and trained to address the property management requirements.

**PRACTICE 1.2.** Roles and duties of staff members responsible for property and equipment management for the Facility should be clearly assigned and defined.

Roles of Logistics staff responsible for PE Management are defined in their respective PDs although all of the duties were not included in the *PPM*. Further, there was no policy or procedural documentation that conveyed the current operating model for property management.

The *PPM* section on Property Management Responsibilities reflects the PE roles and responsibilities that need to be in place to accommodate the construction ramp up. Roles defined in the PPM are prospective (*i.e.,* Fixed Asset Accountant, Property Specialist, Domain Property Administrator). There does not appear to be a policy or procedural document that conveys the current operating model, and, in particular, the role the Logistics Manager and Warehouse Supervisor play in the process. Overall, the CFO is charged with oversight of the Property Management System (PMS) including policies and procedures, training, and overall communication although, in practice, these responsibilities are carried out by the Logistics Manager. The Logistics Manager also supervises the warehouse staff and is responsible for

maintaining the relevant sections of the *PPM*. Descriptions of roles and responsibilities are included in their position descriptions.

It is anticipated that the Property Specialist, once hired, will report to the Logistics Manager and will manage the inventory and training process. As field sites become operational, the Property Specialist is expected to work with each of the designated Domain Specific Property Coordinators to ensure that the field property and equipment is properly identified, located, and maintained. Further, the *PPM* does not detail the specific roles that the Logistics Manager and Warehouse Supervisor will play to support this process. Further details on their roles in property management (*i.e.*, supervision, oversight, and inventory processes, consistent with their position descriptions), should be included in the *PPM.*

In accordance with the Award Management Responsibilities Matrix,[173] the PI has primary responsibility for property and equipment management under their purview with the secondary role provided by "other departments." However, the matrix does not include specific references to the role of the Logistics Office in the process. This seems to conflict with the roles identified in *PPM*. Logistics roles should be highlighted in the matrix.

**PRACTICE 1.3.** The Awardee should ensure that staff members responsible for property and equipment management receive continuing educational opportunities to allow them to successfully support the large Facility.

With the advent of the construction phase, staffing levels to support property management will increase to accommodate the ramp up in acquisitions and the distribution of assets to remote sites. Roles will change. NEON, Inc. has already anticipated this need, and has identified an Asset Accountant position in the Controller's Officer who will focus on capital asset accounting and a Property Specialist in the Logistics area who will manage the property management process and will work with designated domain property administrators at remote sites for property oversight. These new positions will provide checks and balances to the process. At the current time, PDs were not available for these new positions although the functional responsibilities and new position titles were referenced in the PPM.

PE and PMS system related training is currently handled informally by the Logistics Manager and the Warehouse Supervisor although a formal training program will soon be developed. NEON Human Resources recently hired a Manager for Learning and Development who will coordinate the training needs for the entire organization. It is anticipated that the property management program will be assessed and a dedicated training plan developed. In accordance with *Property and Equipment Management*,[174] the training role will be handled by the Property Specialist (PS), once that position is filled. The PS will be expected to provide on-going training

[173] PPM Section 4.2 Exhibit A
[174] PPM Section 3.6

to DSPC staff to ensure that they are up to date and understand NEON's property and equipment policies, the Maximo asset module and the Federal requirements.

NEON needs to ensure that sufficient staffs with defined purpose are hired and trained to address the property management requirements. The future challenge will be the coordination of accountability for all of the components (*i.e.,* 30,000 sensors) of the property management system with the 110 remote sites in the 20 defined domains.

**PRACTICE 1.4.** The Awardee should have a delineation of responsibilities for the property and equipment functions to ensure checks and balances.

The listing of *Property Management Responsibilities*[175] supports the segregation of duties. Acquisition of the asset is a function of P&C staff members who are expected to follow the protocols established in the *Procurement and Contracts Section*[176] of the *PPM*. The Controller's Office has oversight of the Capital Asset Accounting component and records the purchase of the asset into the Dynamics financial system. This information is integrated with the Maximo asset module, controlled by the Logistics group, which captures information on receipt of the asset. Once an asset leaves the warehouse, the custodial department assumes responsibility for the asset and is required to use, maintain, and safeguard the property in accordance with the Federal guidelines. The Logistics Group verifies that this is done as part of the inventory process and is expected to record this information into the official property records.

Equipment shipments are delivered to NEON, Inc. either at the warehouse or remote sites and must be signed for by an authorized employee consistent with the established standards for property control. Property receipt at HQ is handled by the Warehouse Supervisor and staff and distributed. Receiving reports are signed by an authorized employee indicating that the receiving official has checked the quantity, condition, and type of property received. This information is also compared with the Purchase Requisition data in the financial system to ensure that it was an authorized purchase before the receiving information is captured by the Logistics staff into the Maximo database. Controls are in place to ensure that property has been documented. Property records are supported by properly certified documents which record, receipts, issues, adjustments, and disposals. The procedures allow for the property custodian to bring discrepancies to the attention of the Logistics Manager. The equipment is then shipped out to the departments and accepted at the site although the *PPM* is not explicit on who had the authority to sign and accept equipment. Written guidance should be included in the *PPM* to indicate those who have authority to sign and accept property.

Staff understands their roles and the need to segregate responsibilities. These roles will change when the construction phase commences. Roles of the Property Specialist, the Capital Asset Accountant, and the domain property administrators are expected to establish sufficient distribution of responsibilities to ensure checks and balances.

[175] PPM Section 3.6.6
[176] PPM Section 4

## PRINCIPLE 2. THE AWARDEE SHOULD HAVE POLICIES AND PROCEDURES THAT COMPLY WITH FEDERAL REGULATIONS FOR ACQUISITION OF PROPERTY AND EQUIPMENT.

**PRACTICE 2.1** Existing policies and procedures should require classification for types of property.

The policies cited in the Procurement and Contracts[177] section of the *PPM*, and the defined procedures in place in the *PCGM* appear to be sufficient for the overall acquisition of property. Only authorized staff within P&C has the delegated authority to review, approve, and place purchase orders for property ensuring effective controls. Capital assets are purchased within the established in the Approval Requirements Matrix[178] of the *PPM*. The review of the samples selected for equipment acquisitions were documented in accordance with the *PPM*, the Federal regulations and the terms and conditions of the award (Table 12).

The NEON capitalization standards are in Capital Asset[179] of the *PPM*. By definition, a capital asset is a non-consumable item or system purchased or constructed with a total value of $5k or more and a useful life of at least one year. NEON has adopted the "whole asset approach" when defining a bundled capital asset which will include many of 30,000 sensors that will be purchased. This asset approach considers an asset to be an assembly of connected parts and the costs of all parts associated with the initial asset structure are capitalized and depreciated as one asset rather than each component individually. However, all components comprising the asset are inventoried and recorded in the property management system. This will simplify the asset accounting aspect of the asset while the individual components will still be accountable in the property management system. To accomplish this "bundled asset" approach, the accounting system classifies a system in the process of being constructed with a "Construction in Progress" code which will include all of the components of the system. Once the asset goes into service, it will be reclassified and tracked as a specific capital asset although all components of the asset will be linked together. This will be important to keep track of the 30,000 sensors that are expected to be purchased. The current inventory system is in the developmental stage and this capacity was not reviewed to validate this approach.

The Capital Assets section of the *PPM*[180] lists examples of capital assets including the associated capital asset category as well as the estimated useful life. The Capital Assets section of the *PPM* goes into detail on the methodology that is used to estimate the depreciation of an asset for GAAP reporting purposes although NEON, Inc. recognizes that the current asset base was exclusively funded with Federal support and is not subject to depreciation. Costs of assets are charged to the program when the expense is incurred.

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[177] PPM Section 4
[178] PPM Appendix O
[179] PPM Section 3.5
[180] *Ibid*

The NEON property management system also has the capacity to record property information on assets that may not capitalized but are tracked for management purposes. Specifically, information is maintained for non-capitalized assets that are included in a construction in progress account, non-capitalized asset that require maintenance or has a useful life greater than one year, and sensitive items. This information is currently maintained on departmental inventory records but soon will be included as part of the NEON, Inc. inventory.

**PRACTICE 2.2** Internal controls should be in place to ensure appropriate acquisition of property.

Only authorized staff within P&C has the delegated authority to review, approve, and place purchase orders for property ensuring effective controls. Capital assets are purchased within the established *Approval Requirements Matrix*[181] and *Signature Authority*[182] guidelines. Equipment acquisition requests are initiated by responsible program staff into the purchase order system after discussion with P&C ensuring that the specifications are clear and the orders are placed in accordance with the equipment requirements. The purchase request must meet the conditions cited in Conditions for Acquisition and Use of Equipment Section of the *PPM.*[183] (*i.e.,* necessary for the research, not otherwise reasonably available and accessible, and consistent with the terms of the award). Since NSF is the only sponsor for NEON, Inc., all equipment purchased to date has been used for the NSF award.

Purchase requests include the budget number and a statement asserted by the requester that the goods and/or services are necessary. However, there is no process in place which screens for available items. This is understandable considering that NEON, Inc. is a new entity and there is limited inventory available. Although, as the number of inventory items increase, a procedure should be developed to ensure that the inventory is screened and that the equipment being requested is not readily available within the institution prior to purchasing it. Acknowledgement that the screening took place should be included in the PR statement.

Purchase requests are forwarded electronically to the P&C based on the established review protocols. Requests are reviewed for compliance with internal policy and acquisition standards before the orders are placed. Only authorized P&C staff, identified in *Appendix E, Signatory Authority, have* the delegated authority to approve and place purchase orders for property ensuring effective controls. The signatures on the purchase requests reviewed as part of the sample base were consistent with the delegated authority levels and included appropriate supporting documentation.



[181] PPM Appendix O
[182] PPM Appendix E
[183] PPM Section 4.1.2 (H) and PGCM document G.15

Most of NEON, Inc.'s materials and assets are received at HQ warehouse and are inspected and distributed. The Warehouse Supervisor or Assistant examines all shipments for content and damage. Procedures are in place to address discrepancies or damage to the shipment. If the package is acceptable, the Warehouse Supervisor documents receipt of the material on the packing slip and enter the receipt into the Property Management System. Specific step-by-step procedures for receiving and incoming quality control have been drafted in the Headquarters *Warehouse Receiving Procedures,* which will be incorporated into the *Logistics Procedures Manual.* Issues with the proposed guidelines were discussed with staff during the on-site review.

NEON has elected to identify property and equipment utilizing a visually enabled (color tag) process for all assets even if the value does not meet the capitalization threshold. Each trackable asset is assigned a unique asset number and labeled with a corresponding equipment barcode (Capital Asset/Property Identification) which also indicates ownership of the asset. Title to all equipment purchased with NSF funds is vested with NEON, Inc. although NSF reserves a reversionary right to all of the capital assets purchased with NSF funds.

The process involved in tagging assets is unclear. The *Property and Equipment Management Overview* of the *PPM* does not specifically address the step by step process required to affix a property tag either at the warehouse or remote site. The *PPM* seems to suggest that Logistics provides each department with a number of property tags and the PI or property administer is expected to physically tag each piece of equipment when it is received and records the relevant inventory information into Maximo module. However, it was unclear who had authority to enter information into the Maximo system or if system access was controlled. Further, there is no indication if the tagging process has a sequentially numbered control system in place or if standards were established to affix a property tag in a certain location for similar pieces of equipment. It would seem that a standardized procedure might facilitate the inventory process. The tagging process as well as system level authorities should be clarified in the *PPM.*

**PRACTICE 2.3.** The Awardee should have adequate documentation for acquisition of Federally funded equipment.

The review of the samples selected for NEON, Inc. equipment acquisitions were documented in accordance with internal policy, the Federal regulations and the terms and conditions of the award. Justifications for the purchases were included in the documentation and the purchase orders were properly authorized by staff in P&C in accordance with the appropriate signature delegation. Receiving and shipping documentation was also reviewed and found to be complete.

Currently, NSF is the only funding source for equipment acquisition for the Facility and no policies and procedures are in place to document expenditures for equipment charged to more than one funding source. During discussion, the CFO indicated that these procedures would be developed if the need arose to do so in the future.

**PRINCIPLE 3. THE AWARDEE SHOULD HAVE POLICIES AND PROCEDURES THAT COMPLY WITH FEDERAL REGULATIONS AND REQUIREMENTS FOR THE USE AND DISPOSITION OF PROPERTY.**

**PRACTICE 3.1.** The organization adheres to Federal and organizational policies and procedures to ensure proper use of Federally-funded property and equipment.

As part of the inventory review, the Property Specialist (PS) is expected to monitor equipment utilization and work with the technical director to ensure that property is used in accordance with contractual authorization and the purpose for which it was acquired.[184] However, the Property and Equipment Management Overview, Utilization[185] section outlined in the *PPM* does not reference the technical director's responsibilities in this oversight role and should be clarified. In practice, there currently is no conflict because all of the equipment acquired is used to support the Facility.

The Property Specialist is also expected to monitor equipment maintenance and record relevant data into the Maximo system. However, the inventory process has not yet been initiated and the system currently does not have the functionality to capture this information. The vision of the property management system is to automate via barcode and track asset activity with a "cradle-to-grave" approach (*i.e.*, to track everything that happens to a particular piece of equipment that will be included in the metadata. This will be an effective tool in monitoring and maintaining all of the Facility's assets.

**PRACTICE 3.2.** The Awardee should adhere to Federal and organizational policies and procedures to ensure proper disposition of Federally-funded property and equipment.

The policies for equipment disposition (Property and Equipment Management Overview, Disposition[186] section in the *PPM*) included some of the steps that are expected to be followed when an item is declared excess although some of the relevant processes were missing. The procedures do not identify the personnel who are responsible for contacting an agency property manager when an item of GOE is considered excess. The policy is also silent on how to treat income received as a result of disposition or salvage. The policy does not contain processes for determining the conditions under which equipment is transferred, sold, or loaned to another institution nor does it identify the method for handling such transfers/loans. There is some guidance in *Movement/Transportation*,[187] of the *PPM* but this information is vague and needs to be more detailed including appropriate notification and tracking forms.

During the teleconference, it was acknowledge that policies and procedures were being drafted to address these issues. The drafted procedures should ensure that movement of the asset

[184] PPM Section 3.6
[185] PPM Section 3.6.13 (G)
[186] PPM Section 3.6.13 (J)
[187] PPM Section 3.6.13 (C)

follows an appropriate review criterion and that the asset is recorded and tracked throughout the process. Policies should be revised to clarify these procedures.

**PRINCIPLE 4. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE FOR SECURING AND MAINTAINING EQUIPMENT PURCHASED WITH FEDERAL FUNDS.**

**PRACTICE 4.1.** The Awardee should have policies and procedures in place to ensure that equipment purchased with Federal funds is maintained in good condition. The Awardee also should have a process in place to report lost, damaged, or stolen property to NSF.

The Property and Equipment Management Overview, Maintenance[188] section of the *PPM*, provides guidance to staff on the need to maintain equipment in good condition. Maintenance schedules are expected to be monitored by the Property Specialist based on information stored in the Maximo module and coordinated with the Domain Property Administrator and the technical director. However, roles and responsibilities are not defined and the coordination of this effort is unclear. The *PPM* should include roles and responsibilities associated with maintenance of equipment including routine coordination.

Although the functionality is not currently active, the Maximo system is expected to have the capacity to store maintenance and warranty information so that routine maintenance schedules and reminders can be generated. The system would automatically check the warranty coverage before a repair order could be scheduled. Calibration, maintenance, and repair data and costs will also be recorded and made part of the historic information.

There is a general recognition in the *PPM* that property should be secure and safeguarded and relies on the judgment of the custodian to ensure that this is done. Specific security protocols are identified in Physical Security section of the *PPM*.[189] However, the *PPM* does not provide any specific examples or recommendation on how to safeguard assets deployed in the field. The *PPM* should reference minimal expectations necessary to physically secure an asset to prevent unauthorized use.

NEON, Inc. has general policies in place[190] to report lost, stolen, damaged, or destroyed equipment. These are adequate although the section might benefit from more focused procedures (*i.e.*, identifying who has responsibility for investigating the theft, how the information should be reported to the Property Specialist); reference should be made in this section to the Capital Asset Disappearance/Theft form. It is also unclear from the policy what addition steps the Property Specialist must take to notify government agencies in cases where the property is GOE.

[188] PPM Section 3.6.13 (M)
[189] PPM Section 6
[190] *Ibid*

**PRACTICE 4.2.** Guidance for security and maintenance of property and equipment purchased with federal funds should be provided to subawardees.

Policies and procedures for Subaward monitoring are in the *PPM*[191]. It is the responsibility of the P&C staff, as well as the PI, to ensure that the terms and conditions of the sponsor are followed. Prior to issuance of a subaward, P&C performs a risk assessment of the organization to identify any potential risks or concerns that may need to be addressed in the terms of the agreement. Special conditions may be necessary before the award is issued. In addition, the agreement will include all of the specific flow down provisions required by the prime NSF award.

The PI has prime responsibility for Subaward oversight and works with P&C to resolve any issues or concerns. Each year, according to the policy, P&C is expected to send a form to each subrecipient to obtain a self-assessment of issues or concerns. However, this form has not yet been developed nor is there guidance if the subawardees failed to perform. Revisions should be made to these practices in the *PPM.*

NEON has a responsibility to ensure that government property or government furnished property in a subawardee's possession is adequately protected (*PPM Subcontractor Control).*[192] It is unclear, though, if this responsibility lies with the Property Specialist, the PI or P&C. Clarification on oversight responsibilities should be provided in the *PPM*. Although there are no subcontracts currently in place with government funded equipment, this situation may occur in the future. NEON should be prepared by developing a more elaborate subawardee monitoring policy and program, specifying the roles and responsibilities of staff with subaward oversight responsibilities and identifying those with authority to engage the subawardees in corrective action. Further, if there is government owned equipment involved, procedures need to be developed to ensure that the equipment inventory is reported annually to NEON, Inc. and, in turn, to the NSF Property Officer.

**PRINCIPLE 5. THE AWARDEE'S INVENTORY AND RECORDKEEPING PRACTICES SHOULD BE IN COMPLIANCE WITH FEDERAL REQUIREMENTS AND SHOULD BE MAINTAINED ACCURATELY IN A PROPERTY MANAGEMENT OR INVENTORY SYSTEM.**

**PRACTICE 5.1.** The Awardee should have an equipment inventory system that meets the requirements of 2 CFR 215.34.

The inventory system supporting NEON is advancing through various stages of development. At the outset, the Maximo module was integrated with the purchase requisition system and used to record asset information when it was delivered to the warehouse. Recent enhancements have allowed the Logistics group to capture additional data elements and inventory control

[191] PPM Section 4.4
[192] PPM Section 3.6.13 (I)

information. However, reliance for inventory information continues to be placed on departmental spreadsheets. Several enhancements to the Maximo inventory module have been recommended and are pending. Implementation of these would bring the Maximo inventory system into compliance with the administrative principles and consistent with the policies, practices, and procedures in the PPM. These recommendations should be implemented quickly to ensure conformance to the standards. At this stage, it is important to record all of NEON's current assets properly in a compliant inventory system before moving into the construction phase of the project.

The current guidelines in the *PPM* are written prospectively in anticipation of the ramp up to construction and do not reflect current operating procedures. The plan is to migrate the inventory oversight responsibilities to a Property Specialist in Logistics and a Fixed Asset Accountant in the Controller's office, respectively, who will have primary responsibility to carry out the inventory process. PDs for these positions were not available. The envisioned process will require a "verification team" (*i.e.*, the Property Specialist and someone from Finance) to verify the physical location of each asset and are expected to work with each Domain Specific Property Coordinator to locate the item although this coordination effort was not detailed. The Team will verify the asset number, description of equipment (including serial number or other identifier), location, and condition. Other inventory elements required by A-110 (acquisition cost, acquisition date, current value, source of funds, and title) are captured when the asset is processed at the warehouse.

Procedural guidelines (*e.g.*, Conduct a Physical Inventory, HQ Warehouse Receiving) have been drafted and will be incorporated into the *PPM* once finalized. The procedures reference an *Equipment Inventory Form* that is expected to be completed by staff during the inventory review process. Instructions need to be developed for guidance on completing this form and clarification on where the form should be sent. Instructions on the form direct the submitter to send the form to "A&FS Equipment Management" but this entity is not reflected on any of the organizational charts.

During discussion, it was learned that that the Logistics Group and Finance were working together to tag and inventory all items included as capital assets in the financial system. This review should be completed as soon as possible and relevant data recorded into the Maximo property database.

NEON, Inc. has developed an elaborate tagging system to track capital assets as well as other items that may not meet the capitalization threshold (*i.e.*, sensitive items) but need to be monitored. The *PPM* lists some of those items. However, the departmental inventory records that were reviewed did not include items such as NEON, Inc. computers. Efforts should be made to capture relevant information into the Maximo system for items referenced in the *PPM* consistent with policy.

In accordance with the *PPM*, it appears that the Property Management Specialist as well as the Capital Asset Accountant has the authority to enter information into the Property Management System database although the authority level and system controls are unclear. There are some document references that mention the Domain Property Administrator with entry level access. Specific authority levels for the property management database should be identified and documented and only authorized personnel should be able to enter, modify, or alter property records. An effective checks-and-balance process should be maintained for identifying and entering fixed assets in the NEON master property control file/fixed asset subsidiary ledger. This process should require certification on various levels to prevent any one individual from adding or deleting assets without authority.

**PRACTICE 5.2.** The Awardee should have clear procedures for reconciling the inventory of equipment purchased with Federal funds.

*PPM Financial Review of Assets*[193] describes the monthly process performed by the Controller's office to reconcile capital asset accounts. These accounts, within the asset sub ledger (Maximo), are compared to those posted in the financial General ledger (Dynamics) and any discrepancies are investigated to determine the reason for the difference. For the most part, few financial discrepancies are identified because the monthly review is done after several controls to record the asset have already taken place. When the requester puts a PR into the system, it is expected that the correct account code will be used. The PR goes through several levels of review - supervisor, P&C, and accounting, before it is posted in the system. The Senior Accountant reviews expense accounts in the GL related to fixed assets to capture any amounts that were expensed that should have been capitalized. The vast majority of equipment will have part numbers and the item master will indicate that it is part of a capital asset. Necessary adjustments are made with the approval of the Controller. Although accounting adjustments are made on the GL, it is unclear how the Maximo asset module data is updated and reconciled. The *PPM* does not go into detail on the procedures or processes that should be followed nor is there any emphasis in the manual on the need for timely updates to the systems. These processes should be referenced in the *PPM*.

**PRINCIPLE 6. THE AWARDEE SHOULD HAVE A SYSTEM IN PLACE TO ENSURE COMPLIANCE WITH THE TERMS, CONDITIONS, AND SPECIFICATIONS OF THE AWARD RELEVANT TO PROPERTY MANAGEMENT.**

**PRACTICE 6.1.** The Awardee should have developed procedures to monitor compliance with the award terms, conditions and specifications relevant to property management, and to inform appropriate staff members of these terms and conditions.

Information on award terms, conditions, and specifications related to property management are disseminated by P&C to the PI and appropriate staff within CFO in accordance with the Award

[193] PPM Section 3.5.5

Management section of the *PPM*.[194] Special terms and conditions relating to property are brought to the attention of the Logistics staff to ensure compliance. The NSF awards did not have any special conditions pertaining to property management. All the equipment purchased under the NSF awards is titled to NEON, Inc. although NSF retains a reversionary interest.

P&C has drafted award closeout procedures which identify the PI as the responsible staff to report capital equipment to an agency. However, this process conflicts with that which is stated in Section 3.6 of the *PPM* (*i.e.*, that the NEON, Inc. Property Management office (Logistics) is expected to prepare any property reports required by the sponsoring agency). Coordination between the two offices on reporting responsibilities should be clarified in the drafted documents. Further, there should be a process in place whereby the P&C office is notified when the property reporting requirements have been completed.

#### 6.8.4 Results

Areas of Concern include:

PE-1: A physical inventory should be conducted in accordance with the provisions of t the Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, Equipment.[195] The inventory should be conducted at least once every two years, with verification of existence and location of the equipment as well as information on current condition and utilization. Inventory information should be reconciled with the accounting records. The *PPM* does not go into detail on the procedures or processes that should be followed for the reconciliation process nor is there any emphasis in the manual on the need to ensure that the inventory is updated promptly. This should be addressed

Areas for Improvement include:

PE-2: Internal operating procedures and PDs should accurately reflect the roles of staff performing the PE monitoring roles. Roles and responsibilities of property management staff should be clearly stated in the *PPM* consistent with their position descriptions. Roles of the Logistics Manager, the Warehouse Supervisor, Property Specialist, and Domain Property Administrators with regard to inventory control and data management should be specified in the *PPM*.

PE-3: Current operating procedures should be identified. The *PPM* should provide policies and procedures for staff on current operating practices for property management to ensure that appropriate practices are followed.

[194] PPM Section 4.2
[195] 2 CFR 215.34 (f)(3)

PE-4: Develop a structured in-house training program, including refresher training, for property custodians and all staff involved in the various lifecycle stages of property management. The program should include a focus on their responsibilities for personal property management, usage, and disposal.

PE-5: Develop a process to ensure that all proposed equipment purchases are screened against the current inventory list to ensure that the proposed asset is not readily available within the institution prior to purchasing it. Acknowledgement (*i.e.,* check box) that the screening took place should be included in the PR statement.

PE-6: Ensure that the property management system has the functionality to record warranty information and produce the required maintenance reports. This is an important component for management of property, particularly at remote sites, and NEON is encouraged to proceed quickly with this functionality implementation.

PE-7: Revise the Equipment disposition process in the *PPM*. Several items should be addressed: identify the personnel who are responsible for contacting an agency property manager when an item of GOE is considered excess; specify how income is treated as a result of a disposition or salvage, and explain the methods and processes for determining the conditions under which equipment could be transferred, sold, or loaned to another institution.

PE-8: The Equipment Inventory Form should be revised. Guidance instructions should be developed on completing the form. The form indicates that the departments should submit completed forms to "A&FS Equipment Management" but this entity is not reflected on any of the organizational charts.

PE-9: Provide more detailed Instructions to staff for completing and submitting forms identified in Appendices of the *PPM* to ensure that the forms are completed correctly and are forwarded to the appropriate office for review (Appendix B – Capital Asset Disposal Forms, Capital Asset Donation/Scrap Forms, Capital Asset Disappearance/Theft forms.)

PE-10: Specific authority levels for the property management database should be identified and documented. Clearly identify staff and authority levels to access, update, and change records in the Maximo property asset module to ensure that there is integrity of data.

PE-11: Document the step-by- step procedures used to tag equipment and record the information into the Maximo module. It is unclear from the review of the Property and Equipment Management Overview of the PPM, how equipment is tagged, either at the warehouse or at the remote site. NEON, Inc. should ensure that all capital assets are recorded timely and accurately in the system. The procedures should include a standardized location to tag equipment to facilitate the inventory process.

PE-12: Consider utilizing GSAXcess to acquire excess government property which might be useful as the project moves into the construction phase. Participation in the program will conserve supply and equipment funds while supporting reutilization.

PE-13: Consider developing policies and procedures to document expenditures for equipment charged to more than one funding source. During discussion, the CFO indicated that these procedures would be developed if the need arose to do so in the future.

<u>Best Practices</u> include: None identified.

## 7.0 FOLLOW-UP AND MONITORING ACTIVITIES[196]

The follow-up and monitoring process begins 15 days after the last day of the site visit after issuance of preliminary results.[197] The purpose of the follow-up and monitoring is to: (1) focus the Awardee's attention on the high risk areas identified in the preliminary results; and (2) monitor the Awardee's progress in resolving the outstanding issues before closeout.

After the preliminary results are distributed, the BSR team leader contacts the Awardee BSR POC to initiate the follow-up process to resolve high risk issues. With NSF involvement, the Awardee is expected to develop an implementation plan that defines its strategy to address these issues.



[196] The text has been updated from the *BSR Guide v3.1,* September 24, 2010. It now reflects the current procedures for follow-up and monitoring.
[197] This document is delivered no later than 10 days after the last day of the Site visit.

## 8.0 SUMMARY AND CONCLUSIONS

The NSF BSR team concluded the administrative business systems supporting the NEON Facility are in alignment with Federal regulations, although a number of high risk issues were identified across all CFAs. For some, the nature of issues (*e.g.*, financial management written procedures) and/or the number of concerns (*e.g.*, property and equipment) are potentially serious and if not attended to and closely monitored may have systemic impacts. For these reasons, the systems supporting these CFAs do not meet NSF's expectations for the stewardship of Federal funds.

## APPENDICES

### APPENDIX A: BSR PROCESS AND DEFINITIONS[198]

A BSR is conducted to assess the administrative business systems supporting a Facility in eight core functional areas. For the purpose of the BSR report, the Facility is defined as the totality of shared-use infrastructure, instrumentation, and equipment that are accessible to a broad community of researchers and/or educations. Consistent with the NSF process, the review is conducted using the protocols outlined in the BSR Guide and included scoping activities, desk reviews, and site visits. General considerations for determining the scope include evaluation of items such as time period, award, Facility lifecycle, subaward and subcontractor roles and content of core functional areas. A BSR is implemented in three primary phases covering variety of activities.

These phases and the primary activities covered in each are described below:

*Pre-Site Visit*

**BSR Scoping Phase** - The scoping activities are a crucial component in the overall BSR review process as it provides the team members with a mechanism to determine the applicability of the individual core functional areas to the business systems under review for a tailored individual review plans that reflect the uniqueness of Facility. Purpose of the scoping phase is to determine how the BSR will be tailored to the large Facility under review, including the identification of previous reports and audits for leveraging. The scoping process also includes consultations with the NSF program staff and other NSF stakeholders to identify and collect relevant background materials, coordinate team meetings, and to arrange time for a preliminary analysis of available Awardee and Facility documentation contained in the official NSF files (*e.g.*, previous reviews, A-133 audits, award terms and conditions).

The outcome of the scoping phase is the development of a review plan for each CFA. Each review plan outlines the proposed scope of the review as well as the methodology for the review. Development of a review plan is an iterative process. Review plans are continuously reviewed and updated based upon receipt and analysis of new documents and information that impact the scope of the BSR.

**Document Collection and Distribution** - Upon completion of the scoping phase the desk review process begins. At the outset of this process, the BSR team leader coordinates the SME's document request from the Awardee. The BSR team leader coordinates the document requests and sends it to the BSR point-of-contact at the Awardee. Upon receipt of the requested documents, the BSR team leader distributes to them to the appropriate SMEs.

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[198] Text extracted from the current *BSR Guide v3.1; section 3.0.* Aspects of the process have been updated and have been documented in desktop procedures which supersede the Guide but the narrative here does not fully align with current practices.

**Desk Review** – The purpose of the desk review is to initiate the assessment of the administrative business systems supporting the large Facility and to note findings to be later incorporated into the BSR Report. Not all issues are answered in the desk review. When this happens, SMEs note this as a potential issue requiring further examination and follow-up during the site visit.

*Site Visit*

Site visit activities may entail trips to the Facility remote sites and to the Awardee institution. The site visit is an opportunity for SMEs to follow up on outstanding issues, or those items that could not be evaluated during the desk review component of the review. Determination of site visits is based upon SME recommendation to BSR leader consultation with management.

*Post-Site Visit*

Upon completion of the last site visit, the BSR team leader compiles the core functional area reports into a consolidated document and distributes the BSR report to the NSF stakeholders for comment. NSF stakeholders provide their comments and recommendations to the BSR team leader, who revises the report accordingly.

The BSR team leader seeks concurrence from the NSF stakeholders before issuing the draft report to the Awardee. This report should be available within 60 business days following the completion of the last site visit. The Awardee is asked to review the report for factual errors and provide written feedback. The BSR team leader and the NSF stakeholders evaluate the Awardee feedback, make the appropriate changes to the draft, and finalize the report. The team leader issues the final BSR report to the Awardee within 30 business days following the issuance of the draft report.[199] Internally, the final BSR report is distributed to the to the deputy director for Large Facility Projects the NSF Program Officer, the Grants and Agreements Officer, and other NSF stakeholders as appropriate.

A BSR report provides the Results as a result of the BSR, as well as a description for each core functional area along with a breakdown of the scope, and sources and methods and observations for the Facility under review. Each of the items addressed in the core functional area sections are described below:

- **Scope** details the breadth of content reviewed for the core functional area. All principles and practices in the review module should be addressed. The SMEs provide explanations for any principles or practices that were excluded from the review.
- **Sources and Methods** lists the sources of information used to complete the core functional area review and describes the information-gathering methods. This section

[199] If a deviation from the timeline is sought and approved, the due date is adjusted accordingly.

also identifies the individuals who were interviewed and the universe of samples tested (if applicable).

- **Observations** provide the reviewer's overall impression of the administrative business systems that support the large Facility. In this section, the SME presents conclusions for each principle outlined in the module and comments on any areas of the business systems that do not comply with Federal requirements and NSF's expectations.
- **Results** detail the results of SMEs' observations which include:
  - **Areas of Concern** — describes the policies, procedures, and practices that are not in accord with the applicable Federal cost or administrative principles or the terms and conditions of the award. These issues must be addressed by the Awardee and are the basis for the development of the implementation plan.
  - **Areas for Improvement**—outlines actions that the SME believes would improve the Facility's administrative business system. The Awardee is not required to implement these recommendations.
  - **Best Practices**—highlights the Facility's operational and administrative practices, procedures, and policies that exceed the expectations of a proficient business system.[200]



[200] With permission of Awardee

## APPENDIX B: BRIEFING PACKET[201]

*Briefing Packet*

| TAB | Document Title |
|---|---|
| | **Facility and Awardee Background** |
| A | National Ecological Observatory Network, Inc. (NEON) Introductory Site Visit Background Presentations |
| | Overview |
| | Project Overview |
| | Business Plan Review |
| | IT/Telecommunications |
| | Human Resources |
| | Procurement |
| | Accounting |
| B | NEON Introductory Site Visit Draft Minutes –March 25 – 26, 2010 [202] |
| C | NEON Section of NSF 2011 Budget Request to Congress |
| D | NEON Introductory Site Visit Pictures |
| E | NEON Readiness Review Agenda – April 4-6 2011 |
| F | NEON Readiness Review Minutes – April 4-6 2011 |
| G | NEON Readiness Review Report |
| | **Financial Information, Previous Audits and Reviews** |
| H | NEON, Inc. Summary of Previous Audits and Reviews |
| I | Fiscal Year 2010 A-133 Audit and Financial Statements |
| J | Fiscal Year 2009 A-133 Audit and Financial Statements |
| K | Fiscal Year 2008 A-133 Audit and Financial Statements |
| L | 2008 NSF Audit Response letter to NEON |
| M | NEON Procurement and Subaward Review 2009 |



[201] Due to timing issues, it is not always possible to incorporate all of the items used in scoping. The listing contained here represents the items provided in the version of the briefing packet when it was first issued.

[202] Notes have been incorporated into the slide notes, given the considerable overlap in presentation and slide material.

| TAB | Document Title |
|---|---|
| N | NEON Conceptual Design Review – November 6-9, 2006 |
| O | NEON Preliminary Design Review - June 7-11, 2009 |
| P | NEON Final Design Review – November 9-13, 2009 |
| Q | Corrective Action Letter from NSF to NEON, Inc. March 25, 2008 |
| R | NEON, Inc. Status Report in Response to Corrective Action Letter |
| S | AMBAP Review[203] |
| T | NSF Property Review[204] |
| U | Federal Financial Reporting Testing Report[205] |
| | **Award Related Information** |
| V | NEON Awards Summary Information |
| | NEON Awards List |
| | NEON Award and Amendment Table |
| W | NEON Awards |
| | Cooperative Agreement DBI-0653461 *Initial NEON Procurements for Science and Organizational Development.* |
| | Cooperative Agreement DBI-0735106 *Implementation of NEON Project Activities Leading to the Final Design Review.* |
| | Cooperative Agreement EF-0752017 *Organizational and Project Management Support to complete the NEON Construction Ready Design and Project Execution Plan.* |
| | Cooperative Agreement EF-0808232 funded under the American Recovery and Reinvestment Act of 2009 (Public Law 111-5). *Completion of the NEON Cyber Infrastructure Construction-Ready Design.* |
| | Cooperative Agreement EF-0940226 funded under the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) *Fabrication and testing of Airborne Imaging Spectrometer.* |
| X | Terms and Conditions |
| | NSF American Recovery and Reinvestment Act of 2009, Terms and Conditions May 2009 |
| | NSF Cooperative Agreement Financial & Administrative Terms and Conditions (CA-FATC), effective March 20, 2006. |
| | NSF Cooperative Agreement Supplemental Financial & Administrative Terms and Conditions effective October 12, 2004. |
| | NSF General Programmatic Terms and Conditions for Grant Proposal Guide (GPG) Cooperative Agreements, effective June 16, 2005 |

[203] Confirmation from NSF DIAS AMBAP contact *via* email 8/23/2011.
[204] Confirmation from NSF DAS Property contact *via* email 11/19/2010.
[205] Confirmation from NSF DFM FFR Testing contact *via* email 8/23/2011.

| TAB | Document Title |
|---|---|
| | **Business Systems Review Guide and other Reference Documents** |
| Y | BSR Guide – v 3.1, September 24, 2010 |
| Z | NEON Timeline |
| AA | NEON Counterpart List |
| BB | NEON Consolidated Document Request List |



## APPENDIX C: REVIEW WORK PAPERS[206]

### Minutes and Agendas

[206] There may be duplicates items contained in the briefing packet and CFA work papers due to the recently adopted organizational schema that lists the briefing materials as a table.

| | |
|---|---|
| A | Introductory Visit Agenda |
| B | Introductory Visit Minutes |
| C | Award Management Teleconference Minutes 6/24/2011 |
| D | Human Resources Teleconference Minutes 6/27/2011 |
| E | Financial Management Teleconferences Minutes 6/27/2011 |
| F | Financial Reporting Teleconference Minutes 6/27/2011 |
| G | Property and Equipment Teleconference Minutes 6/28/2011 |
| H | Property and Equipment Teleconference Minutes 6/29/2011 |
| I | Financial Management/Reporting Minutes 6/29/2011 |
| J | Budget and Planning Teleconference Minutes 6/30/2011 |
| K | General Management Teleconference Minutes 6/30/2011 |
| L | Site Visit Agenda 8/1/2011-8/3/2011 |
| M | Site Visit Minutes Day 1 |
| N | Site Visit Minutes Day 2 |
| O | Site Visit Minutes Day 3 |

| TAB | Document Title |
|---|---|
| **1** | **General Management** |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Board of Directors Manual version 1.4 |
| D | NEON, Inc. Policies and Procedures Manual |
| E | Excluded |
| F | NEON, Inc. Salary Manual |

| TAB | Document Title |
|---|---|
| G | Position Descriptions<br>Chief Executive Officer<br>Chief Financial Officer<br>Chief Operating Officer<br>Chief of Human Resources<br>Chief of Education and Public Development<br>Manager, Learning and Development |
| H | NEON, Inc. Mid-Term Business Plan |
| 2 | Award Management |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Policies and Procedures Manual |
| D | Key Personnel |
| E | Excluded |
| F | Position Descriptions<br>Chief Executive Officer<br>Chief Operating Officer<br>Chief Financial Officer<br>Chief Science Officer<br>Controller<br>Director of Procurements and Contracts<br>Manager, Learning and Development |
| G | NEON Responsibility Matrix |
| H | Award Management Checklist |
| I | NEON Training Records Spreadsheet – All Facility |
| J | NEON, Inc. Procurement and Contracts Guidance Manual |
| K | Key Personnel Requests |
| L | Information Dissemination Examples |

| TAB | Document Title |
|---|---|
| M | Publications |
| **3** | **Budget and Planning** |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | Position Descriptions<br>Director of PMCS<br>Chief Financial Officer<br>Controller<br>Project Cost Analyst<br>Project Cost Analyst II |
| D | NEON, Inc. Cost Estimating Plan |
| E | Excluded |
| F | Contingency Management Plan |
| G | NSF Large Facilities Guide |
| 4 | Financial Management |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Accounting Manual |
| D | NEON, Inc. Policies and Procedures Manual |
| E | Excluded |
| F | Position Descriptions<br>Chief Financial Officer<br>Controller<br>Project Accountant<br>Accounting Assistant<br>Accountant I |
| G | Financial Management Samples |
| 5 | Financial Reporting |

| TAB | Document Title |
|---|---|
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Policies and Procedures Manual |
| D | Position Description<br>Chief Financial Officer<br>Controller<br>Project Accountant Supervisor<br>Accountant<br>Accounting Assistant<br>A/P Specialist<br>Senior Accountant |
| E | Excluded |
| F | Financial Reporting Samples |
| 6 | Human Resources |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Policies and Procedures Manual |
| D | NEON, Inc. Mid-Term Business Plan |
| E | Excluded |
| F | Position Description<br>Chief of Human Resources<br>Chief Operating Officer<br>Human Resources Director<br>Staffing Manager<br>Administrative Service Manager<br>Learning and Development Manager<br>Payroll and HRIS Manager |
| G | Domain Human Resources Strategy |
| H | Salary and Compensation Manual |

| TAB | Document Title |
|---|---|
| I | Training Record – All Facility |
| J | Diversity Commitment Letter from CEO |
| K | NEON, Inc. Employee Handbook |
| L | Human Resources Strategic Plan |
| 7 | Procurement |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Policies and Procedures Manual |
| D | NEON, Inc. Procurement and Contracts Guidance Manual |
| E | Excluded |
| F | Position Description<br>Director of Procurements and Contracts<br>Assistant Director of Procurements and Contracts<br>Senior Buyer<br>Contract Specialist<br>Sr. Contracts Administrator<br>Contracts Administrator |
| G | Statement of Work form |
| H | Specifications and Purchase form |
| I | Solicitations, Evaluations and Award of Quotations |
| J | Oral Quotes/Solicitations |
| K | Procurement Checklist |
| L | Procurement Samples |
| 8 | Property and Equipment |
| A | NEON, Inc. Briefing Packet (See Appendix B) |
| B | NEON, Inc. Organizational Charts (6/29/2011) |
| C | NEON, Inc. Policies and Procedures Manual |
| D | Property and Equipment Management |

| TAB | Document Title |
| --- | --- |
| E | Excluded |
| F | Position Description<br>Logistics Manager<br>Warehouse Supervisor<br>Warehouse Associate |
| G | Approval Requirements Matrix |
| H | Signature Authority Guidelines |
| I | Warehouse Receiving Procedures |
| J | Equipment Inventory Form |
| K | Property and Equipment Samples |

## APPENDIX D: LIST OF ACRONYMS[207]

Award Management (AM), page 19
Award Monitoring and Business Assistance (AMBAP), page 15
Assistant Director of Procurement (ADP), page 82
Budget, Finance and Award Management (BFA), 1
Budget and Planning (BP), 19
Business System Review (BSR), 1
Chief Executive Officer (CEO), 30
Chief Financial Officer (CFO), 31
Chief Human Resources Officer (CHRO), 31
Chief Operating Officer (COO), 17
Cooperative Agreement (CA), 17
Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC), 39
Conflict of Interest (COI), 34
Contingency Management Plan (CMP), 48
Core Functional Areas (CFAs), 1
Deputy Director of Large Facility Projects (DDLFP), 113
Director of Procurement and Contracts (DPC), 82
Domain Specific Property Coordinators (DSPC), 97
Employee's Activity (EA), 5
Equal Employment Opportunity (EEO), 71
FastLane (FL), 4
Federal Cash Transactions Review (FCTR), 13
Federal Financial Reports (FFR), 15
Fiscal Year (FY), 10
Finance and Accounting (F&A), 38
Financial Management (FM), 20
Financial Reporting (FR), 55
General Ledger (GL), 19
Generally Accepted Accounting Principles (GAAP), 19
General Management (GM), 19
Government Owned Equipment (GOE), 8
Grant Proposal Guide (GPG), 76
Human Resources (HR), 20
Information Technology (IT), 30
Major Research Equipment and Facilities Construction (MREFC), 10
Microsoft Dynamics SL (MDSL), 53
National Ecological Observatory Network (NEON), 1
National Science Board (NSB), 10
Office of Inspector General (OIG), 14
Office of Management and Budget (OMB), 15

[207] Numbers denote first usage of acronym